

ῬΑΤΑΑΣ ΟΥΡΑΝΙΟΣ,
The COELESTIAL ATLAS;

OR, A NEW
EPHEMERIS
For the YEAR of our LORD 1790.

Being the second after
BISSEXTILE, or LEAP-YEAR.

Wherein are contained
The Heliocentrick and Geocentrick Places of the Planets,
the ECLIPSES of the Luminaries, and other remarkable PHÆNO-
MENA that will happen this Year.

Carefully computed
From the genuine TABLES of Dr. EDMUND HALLEY,
those of Professor MAYER, and other the latest and most correct
ASTRONOMICAL TABLES.

ALSO
A Compleat ALMANACK containing the FEASTS and FASTS
of the Church of ENGLAND; the Times of the LUNATIONS;
the Rising and Setting of the Sun, Moon, and Planets, &c.

Adapted to the
Meridian and Latitude of the ancient and honourable
CITY of LONDON.

To which are added,
Several useful TABLES: As, a TABLE of the Sun's
semi-diurnal Arcs, by which the Times of the Sun's Rising and
Setting may be known by Inspection, on every Day in the Year;
in any Part of GREAT-BRITAIN or IRELAND; a TABLE of the
TIDES of the Sea, and a very correct one of the Eclipses of JUPITER's
Satellites; a TABLE of the Sun's Right-Ascension; various exact
Positions of the most remarkable fixed Stars, corrected from Mr. FLAMSTEED's
Catalogue; and, lastly, a correct TABLE of Latitudes and Longi-
tudes of the most remarkable Places in the World.

By ROBERT WHITE,
Teacher of the Mathematicks.

Οἱ ἀγαθοὶ διηγουμένται δοξάει Θεῷ.

The FORTY-FIRST IMPRESSION.

46-6-24 - 1790 LONDON:

Printed for the Company of STATIONERS; and sold
by ROBERT HORSFIELD, at their Hall, in Ludgate-street.

[Price NINE-PENCE stitched.]

Chronological Notes for the Year 1790.

Golden Number	-	5	Septuagesima Sunday	Jan. 31
Cycle of the Sun	-	7	Shrove Sunday	- Feb. 14
The Epact	-	14	Easter Day	- April 4
Dominical Letter	-	C	Whit Sunday	- May 23
Number of Direction	-	14	Trinity Sunday	- 30
Roman Indiction	-	8	Advent Sunday	- Nov. 28

Astronomical CHARACTERS explained.

♈ Aries	♋ Cancer	♎ Libra	♏ Capricorn
♉ Taurus	♌ Leo	♍ Scorpio	♐ Aquarius
♊ Gemini	♍ Virgo	♏ Sagittary	♑ Pisces

♄ Saturn	☉ Sol (the Sun)	☾ Luna (the Moon)	☿ Tellus,
♃ Jupiter	♀ Venus	♊ Moon's N. Node	Terra (or
♂ Mars	☿ Mercury	♋ her S. Node	the Earth)

♄ Conjunction when Planets are in the same Sign, Deg. Min. &c.

* Sextile when 2 Signs dist. | Δ Trine when 4 Signs dist.

□ Quartile when 3 Signs dist. | ☿ Opposition when 6 Signs dist.

Of the Four Quarters of the YEAR 1790.

		d	h	m
T HE Spring Quarter begins	-	March 20	9	38 morn.
The Summer Quarter begins	-	June 21	7	40 morn.
The Autumnal Quarter begins	-	Sept. 22	9	17 aftern.
The Winter Quarter begins	-	Dec. 21	1	52 aftern.

THE beautiful Planet VENUS will be an Evening Star 'till March the 18th; and after that Time she will be a Morning Star to the Year's End.

JUPITER will be a Morning Star 'till the 14th Day of February, then an Evening Star till the 3d of September, at which Time he becomes a Morning Star, and so continues to the Year's End.

The NAMES of the Learned JUDGES of the LAW.

I. The Right Hon. Lord Thurlow, Lord High Chancellor.

Right Honourable Sir Richard Pepper Arden, Knt. Master of the Rolls.

II. In the } Right Hon. Lord Kenyon, L. C. J. Sir W. H. Ashurst, Knt.
K. Bench. } Francis Buller, Esq; Sir Nash Grose, Knt.III. In the } R. H. Alex. Lord Loughborough, L. C. J. Sir Henry Gould, Knt.
C. Pleas. } John Heath, Esq; Sir John Wilfon, Knt.IV. In the } Sir James Eyre, Knt. L. C. B. Sir Beaumont Hotham, Knt.
Exchequer } Sir Richard Perryn, Knt. Sir Alex. Thompson, Knt.

Sir Alex. M'Donald, Knt. Attor. General; Sir John Scott, Knt. Solic. Gen.

A TABLE of TERMS and Returns for the Year 1790.

Hilary Term begins Jan. 23, ends Feb. 12.

Returns or Effoign-days.				Exc.	Ret.	Ap.	W. D.
In eight Days of St. Hilary,	-	-	Jan. 20	21	22	23	Saturd.
In fifteen Days of St. Hilary	-	-	27	28	29	30	Saturd.
On the Mor. of the Purif. of the Bl. V. M.	Feb. 3			4	5	6	Saturd.
In eight Days of the Purif. of the Bl. V. M.			9	10	11	12	Friday

Easter Term begins April 21, ends May 17.

In fifteen Days of Easter	-	-	April 18	19	20	21	Wedn.
From Easter Day in three Weeks	-		25	26	27	28	Wedn.
From Easter Day in one Month	-	May 2	3	4	5		Wedn.
From Easter Day in five Weeks	-	-	9	10	11	12	Wedn.
On the Mor. of the Ascension of the Lord	-		14	15	16	17	Monday

Trinity Term begins June 4, ends June 23.

On the Morrow of the Holy Trinity,	-	May 31	J. 1	2	4	Friday.
In eight Days of the Holy Trinity,	-	June 6	7	8	9	Wedn.
In fifteen Days of the Holy Trinity,	-	13	14	15	16	Wedn.
From the Day of the Holy Trin in 3 Weeks		20	21	22	23	Wedn.

Michaelmas Term begins Nov. 6, ends Nov. 29.

On the Morrow of All Souls	-	-	Nov. 3	4	5	6	Saturd.
On the Morrow of St. Martin	-	-	12	13	14	15	Mond.
In eight Days of St. Martin	-	-	18	19	20	22	Mond.
In fifteen Days of St. Martin	-	-	25	26	27	29	Mond.

N. B. No Sittings in Westminster-Hall on the Second of February, Ascension-day, and Midsummer-day.

The Exchequer opens eight Days before any Term begins, except Trinity, before which it opens but four Days.

Note, The first and last Days of every Term, are the first and last Days of Appearance.

BIRTH-DAYS of the ROYAL FAMILY.

KING GEORGE III. June 4, 1738	Prince Aug. Fred. Jan. 27, 1773
Prince of Wales, Aug. 12, 1762	Prince Adolph. Fred. Feb. 24, 1774
Prince Frederick, Aug. 16, 1763	Princess Mary, April 25, - 1776
Prince Wm. Henry, Aug. 21, 1765	Princess Sophia, Nov. 3, - 1777
Prs. Cha. Aug. Mat. Sept. 29, 1766	Princess Amelia, Aug. 7, - 1783
Prince Edward, Nov. 2, - 1767	Queen Charlotte, May 19, 1744
Prs. Augusta Sophia, Nov. 8, 1768	Prs. Augusta of Brun. Aug. 11, 1737
Prs. Elizabeth, May 22, - 1770	Duke of Gloucester, Nov. 25, 1743
Prince Ernest Augustus, June 5, 1771	Duke of Cumberland, Nov. 7, 1745

SOVEREIGNS of EUROPE, their Accession, &c.

Kingdoms, &c.	To whom subject.	When born.	Began to reign.
England, &c.	George III.	June 4, 1738	Oct. 25, 1760
France	Lewis XVI.	Aug. 23, 1754	May 10, 1774
Russia	Catharine II.	May 2, 1729	July 9, 1762
Spain	Charles IV.	Nov. 11, 1748	Dec. , 1788
Portugal	Mary	Dec. 7, 1734	Feb. 24, 1777
Prussia	Frederic IV.	Sept. 25, 1744	Aug. 17, 1786
Denmark. & Norway	Christian VII.	Jan. 29, 1749	Jan. 14, 1766
Sweden	Gustavus III.	Jan. 24, 1746	Feb. 12, 1771
Germany	Joseph	Mar. 13, 1741	Aug. 18, 1765
Poland	Stanislaus III.	Jan. 17, 1732	Nov. 25, 1764
Holland	William V.	March 8, 1748	Oct. 11, 1751
Papedom	Pius VI.	Dec. 27, 1717	Feb. 18, 1775
Sardinia	Victor	June 26, 1726	Mar. 20, 1773
Ottoman Empire	Selim III.	1761	April 7, 1789

The FULL WEIGHT of the Coins, with the LEAST WEIGHT allowed to pass of the Gold Coin.

Wt. allowed.		Full Wt.	SILVER.		Full Wt.
GOLD.	dwt. gr.	dwt. gr.			dwt. gr.
Guinea, - -	5 8	5 9 ³ / ₄	A Crown, - -	-	19 8 ¹ / ₂
Half Guinea, -	2 16	2 16 ⁶ / ₄	Half Crown, -	-	9 16 ³ / ₄
Quarter Guinea, 1	8	1 8 ³ / ₄	Shilling, - -	-	3 20 ² / ₄
			Six Pence, - -	-	1 22 ¹ / ₄

According to the above proportions it appears, that the value of a *lb.* of silver is 62 s. or 3 l. 2 s. and of a *lb.* of gold is 44½ guineas, or 46 l. 14 s. 6 d. Also that the oz. of silver is 5 s. 2 d. and the oz. of gold 3 l. 17 s. 10½ d. So that the value of the standard gold is 15 times that of the silver, and 1-14th more,

A TABLE of the **KINGS** and **QUEENS** of **ENGLAND**
since the **CONQUEST**.

Kings and Queens	Born A.D.	Began their Reign	Reigned Y. M. D.	Age	Rem. Deaths and Dethroned	Where buried
Will. Conq.	1027	1066 Oct. 14	20 10 26	60	Burst by Leap.	Caen, Norm
Will. Rufus	1057	1087 Sept. 9	12 10 24	43	Slain accidentally.	Winchester
Henry I.	1068	1100 Aug. 2	35 3 29	77		Reading
Stephen	1105	1135 Dec. 1	18 10 24	49		Feverham
Henry II.	1133	1154 Oct. 25	34 8 11	55		Fonteveraud
Richard I.	1156	1189 July 6	9 9 0	43	Slain with an Arrow.	Fonteveraud
John	1165	1199 April 6	17 6 13	50		Worcester
Henry III.	1207	1216 Oct. 19	56 0 28	55		Westminster
Edward I.	1239	1272 Nov. 16	34 7 21	67		Westminster
Edward II.	1284	1307 July 7	19 6 18	43		Gloucester
Edward III.	1312	1327 Jan. 25	50 4 27	65		Westminster
Richard II.	1366	1377 June 21	22 3 8	33	Dep. & murd.	Westminster
Henry IV.	1367	1399 Sept. 29	13 5 20	46		Canterbury
Henry V.	1389	1413 Mar. 26	9 5 11	33		Westminster
Henry VI.	1421	1422 Aug. 31	38 6 4	40	Dep. & murd.	Windfor
Edward IV.	1442	1461 Mar. 4	22 1 5	41		Windfor
Edward V.	1471	1483 April 9	0 2 15	12	Murder'd.	Not known
Richard III.	1443	1483 June 22	2 2 0	42	Slain in Battle.	Leicester
Henry VII.	1456	1485 Aug. 22	23 8 0	52		Westminster
Henry VIII.	1492	1509 April 22	17 9 6	55		Windfor
Edward VI.	1537	1547 Jan. 28	6 5 8	13		Westminster
Mary I.	1516	1553 July 6	5 4 11	42		Westminster
Elizabeth	1533	1558 Nov. 17	44 4 7	69		Westminster
James I.	1566	1603 Mar. 24	12 0 3	58		Westminster
Charles I.	1600	1625 Mar. 27	23 10 3	48		Windfor
Charles II.	1630	1649 Jan. 30	16 0 7	54		Westminster
James II.	1633	1685 Feb. 6	4 0 7	57	Abdicated.	St. Germain
Mary II.	1662	1689 Feb. 13	5 10 15	32		Westminster
William III.	1650	1689 Feb. 13	13 0 23	52		Westminster
Anne	1665	1702 Mar. 8	12 4 24	40		Westminster
George I.	1660	1714 Aug. 1	12 10 10	57		Hanover
George II.	1683	1727 June 11	33 4 14	77		Westminster
George III.	1738	1760 Oct. 25	Crowned Sept. 22, 1761.			

Above you view the Rise and Fall of Kings,
Whose Fate sometimes a useful Lesson brings,
Well if all Men could profit from the past!
Each know his Duty, each excel the last,
And justly execute his stated Task.

A TABLE of the most Reverend, Right Reverend, and Reverend, the ARCHBISHOPS, BISHOPS and DEANS, exercising Ecclesiastical Jurisdiction, 1790.

BISHOPS.	Sees.	Date.	Succeeded.	DEANS.
Dr. John Moore	{ <i>Bangor</i>	1775	Ewer deceased	
Arch-Bishop	{ <i>Canterb. A. B.</i>	1783	Cornwallis dec.	Dr. Horne
Dr. Will. Markham	{ <i>Chester</i>	1771	Keene transl.	
Arch-Bishop	{ <i>York A. B.</i>	1777	Drummond de.	Dr. J. Fountayne
Dr. Beilby Porteus	{ <i>Chester</i>	1776	Markham tran.	
	{ <i>London</i>	1787	Lowth deceas.	Bishop Pretymen
Dr. Tho. Thurlow	{ <i>Lincoln</i>	1779	Green dec.	
	{ <i>Durham</i>	1787	Egerton dec.	Hon. W. Digby
	{ <i>Litch & Cov.</i>	1771	Egerton transl.	
Hon. Dr. B. North	{ <i>Worcester</i>	1774	Johnson deceas.	
	{ <i>Winchester</i>	1781	Thomas deceas.	Dr. Ogle
Sir W. Ashburnham	{ <i>Chichester</i>	1754	Mawson transl.	Dr. Harward
Dr. Charles Mofs	{ <i>St. David's</i>	1766	Lowth transl.	
	{ <i>Bath & Wells</i>	1774	Willes decease	Ld. Fr. Seymour
	{ <i>Landaff</i>	1769	Shipley transl.	
Dr. S. Barrington	{ <i>Salisbury</i>	1782	Hume dec.	Dr. John Ekins
Dr. John Hinchliffe	{ <i>Peterborough</i>	1769	Lamb dec.	Dr. Ch. Tarrant
	{ <i>St. David's</i>	1774	Mofs transl.	
H. Dr. James Yorke	{ <i>Gloucester</i>	1779	Warburton dec.	
	{ <i>Ely</i>	1781	Keene deceased	Dr. Cooke
Dr. John Thomas	{ <i>Rocheſter</i>	1774	Pearce dec.	Dr. Dampier
Dr. Richard Hurd	{ <i>Litch. & Cov.</i>	1775	B. North tr.	
	{ <i>Worceſter</i>	1781	B. North tr.	Dr. St. John
	{ <i>Oxford</i>	1777	Lowth transl.	
Dr. John Butler	{ <i>Hereford</i>	1788	Harley deceas.	Dr. Wetherell
Dr. John Roſs	{ <i>Exeter</i>	1778	Keppel dec.	Dr. Buller
Dr. John Warren	{ <i>St. David's</i>	1779	Yorke transl.	
	{ <i>Bangor</i>	1783	Moore transl.	Dr. Tho. Lloyd
Dr. J. Cornwallis	{ <i>Litch. & Cov.</i>	1781	Hurd transl.	Dr. Proby
Dr. Samuel Hallifax	{ <i>Glouceſter</i>	1781	Yorke transl.	
	{ <i>St. Aſaph</i>	1789	Shipley dec.	Dr. Joſiah Tucker
	{ <i>Bristol</i>	1782	Newton dec.	
Dr. Lewis Bagot	{ <i>Norwich</i>	1783	Yonge dec.	Dr. P. Lloyd
Dr. Richard Watſon	{ <i>Landaff</i>	1782	Barrington tr.	Mr. Potter, A.D.
Dr. Edward Smalwel	{ <i>St. David's</i>	1783	Warren transl.	
	{ <i>Oxford</i>	1788	Butler transl.	Dr. Jackson
Dr. Chriſt. Wilſon	{ <i>Bristol</i>	1783	Bagot transl.	Dr. Hallam
Dr. W. Pretymen	{ <i>Lincoln</i>	1787	Thurlow tran.	Dr. Kaye
Dr. John Douglas	{ <i>Carlisle</i>	1787	Law dec.	Dr. Jeffery Ekins
Dr. William Cleaver	{ <i>Cheſter</i>	1788	Porteus tran.	Dr. Cotton
Dr. Samuel Horſley	{ <i>St. David's</i>	1788	Smalwell tr.	Mr. Wollafton, P.
Dr. Richard Beadon	{ <i>Glouceſter</i>	1780	Hallifax tran.	Mr. W.D. Shipley
	{ <i>Winſter</i>	1768		Bishop Thomas
Dr. Claudius Crigan	{ <i>Sodor & Man</i>	1784	Mason dec.	
	{ <i>Windſor</i>	1788		Bishop Douglas

A General INTEREST TABLE,
by which the Interest of any Sum, at any Rate, and for any Time,
may be readily found.

Days	3 per Cent.				3½ per Cent.				4 per Cent.				4½ per Cent.				5 per Cent.				
	l.	s.	d.	q.	l.	s.	d.	q.	l.	s.	d.	q.	l.	s.	d.	q.	l.	s.	d.	q.	
1			1	3			2	1			2	2			3	0			3	0	
2			3	3			4	2			5	1			6	0			6	2	
3			5	3			6	3			7	3			8	3			9	3	
4			7	3			9	0			10	2			11	3			11	0	
5			9	3			11	2		1	1	1		1	2	3		1	4	1	
6			11	3		1	1	3		1	3	3		1	5	3		1	7	3	
7		1	1	3		1	4	0		1	6	1		1	8	3		1	11	0	
8		1	3	3		1	6	1		1	9	0		1	11	3		2	2	1	
9		1	5	3		1	8	2		1	11	2		2	2	2		2	5	2	
10		1	7	2		1	11	0		2	2	1		2	5	2		2	8	3	
20		3	3	1		3	10	0		4	4	2		4	11	1		5	5	3	
30		4	11	0		5	9	0		6	6	3		7	4	3		8	2	2	
40		6	6	3		7	8	0		8	9	0		9	10	1		10	11	3	
50		8	2	2		9	7	0		10	11	2		12	3	3		13	8	1	
60		9	10	1		11	6	0		13	1	3		14	9	2		16	5	1	
70		11	6	0		13	5	0		15	4	0		17	3	1		19	2	0	
80		13	1	3		15	4	0		17	6	1		19	8	3		1	11	0	
90		14	9	2		17	3	0		19	8	2		1	2	2		1	4	7	3
100		16	5	1		19	2	0		1	11	0		1	4	8		1	7	4	3
200	1	12	10	2	1	18	4	12	3	10	0	2		9	3	3	2	14	9	2	
300	2	9	3	3	2	17	6	13	5	9	0	3		13	11	14	2	2	2	1	

N. B. This Table contains the interest of 100l. for all the several days in the 1st column, and at the several rates of 3, 3½, 4, 4½, and 5 per cent. in the other 5 columns.

To find the interest of 100l. for any other time, as 1 year and 278 days, at 4½ per cent. Take the sums for the several days here annexed.

The interest for 1 year	4	10	0	0
Against 200 days is	-	2	9	3
70 days	-	0	17	3
8 days	-	0	1	11
Interest required	-	7	18	6

For any other Sum than 100l. First find for 100l. as above, and take it so many times or parts as the sum is of 100l. Thus, to find for 355l. at 4½, for 1 year and 278 days,

First, 3 times the above sum, for 300l.) is	-	23	15	8
½ (for 50l.) is	-	3	19	3
⅛ of this (for 5l.) is	-	0	7	11
So for 355 it is	-	28	2	10

When the interest is required for any other rate than those in the table, it may easily be made out from them. So ½ of 5 is 2½, ½ of 4 is 2, ½ of 3 is 1½, ⅓ of 3 is 1, 1-6th of 3 is ½, and 1-12th of 3 is ¼. And so, by parts, or by adding or subtracting, any rate may be made out.

The LUNATIONS.

Full Moon the 1st day, at 0 minutes past 7 morning.

Last quarter the 8th day, at 6 minutes past 2 morning.

New Moon the 15th day, at 56 minutes past 7 morning.

First quarter the 23d day, at 45 minutes past 10 morning.

Full Moon the 30th day, at 16 minutes past 7 night.

M D	Sundays & other remark. days	☉ rises	☉ sets	☉'s declin.	☾'s declin.	☾ rises & sets	☾ south	Clock bef. ☉	
1	Circumcision	8 4	3 56	21 8 59	18 n 31	☾ rises	morn	4' 15"	
2		8 4	3 56	22 53	15 51	6 a 0	0 38	4 43	
3	C S. aft. Christ.	8 3	3 57	22 4	12 13	7 17	1 33	5 11	
4		8 2	3 58	22 4	7 51	8 36	2 27	5 38	
5	Old Christ. Day	8 2	3 58	22 34	3 2	9 54	3 19	6 5	
6	Epiphany	Tw. day	3 59	22 27	18 56	11 8	4 10	6 31	
7		3 0	4 0	22 19	6 45	morn.	5 1	6 57	
8	Lucian	7 59	4 1	22 11	11 10	0 29	5 52	7 22	
9		7 58	4 2	22 2	14 5	1 46	6 44	7 47	
10	C S. aft. Epiph.	7 57	4 3	21 53	17 4	3 0	7 38	8 12	
11	Flow Monday	7 56	4 4	21 44	19 39	4 10	8 33	8 35	
12	O. N. Year's d.	7 54	4 5	21 34	20 21	5 12	9 28	9 38	
13	Cam. T. begin	Hillary	4 6	21 24	19 55	6 5	10 22	9 21	
14	Oxf. Term beg.	7 53	4 7	21 13	18 24	6 49	11 14	9 43	
15		7 52	4 8	21 2	15 59	☾ sets	0 a 4	10 4	
16		7 50	4 10	20 51	12 32	5 a 56	0 5	10 24	
17	C S. aft. Epiph.	O. T. D.	4 11	20 39	9 14	7 3	1 37	10 44	
18	Q. Char. b. d. k.	Prisca	4 12	20 26	5 17	8 7	2 2	11 3	
19		7 46	4 14	20 14	1 11	9 12	3 2	11 22	
20	Fabian	7 45	4 15	20 1	2 n 55	10 17	3 44	11 39	
21	Agnes	7 44	4 16	19 47	6 54	11 20	4 26	11 56	
22	Vincent	7 42	4 18	19 34	10 37	morn.	5 0	12 12	
23	Hil. Term beg.	7 4	4 10	19 10	13 56	0 24	5 53	12 2	
24	C S. aft. Epiph.	7 39	4 21	19 5	10 4	1 26	6 40	12 41	
25	Con. of St. Paul	7 37	4 22	18 50	18 48	2 20	7 30	12 55	
26		7 36	4 24	18 38	20 1	3 30	8 22	13 7	
27	Pr. Aug. Fr. b.	7 34	4 26	18 19	20 11	4 20	9 17	13 19	
28		7 33	4 27	18 4	19 13	5 18	10 13	13 30	
29		7 31	4 20	17 47	17 3	6 2	11 5	13 40	
30	K. Cha. mart.	7 30	4 3	17 31	13 4	☾ rises	morn	13 50	
31	Septuages. Sun.	7 28	4 32	17 14	9 3	6 a 4	0 5	13 58	
Days	Day increaf.	Length of Day.	Helioc. long. ♀	Helioc. long. 2♂	Helioc. long. ♂	Helioc. long. ☉	Helioc. long. ♀	Helioc. long. ☿	h sets.
1	0 8	7 52	23 3	23 5	4 20	11 22	24 8 52	6 22	10 a 0
7	0 16	8 0	23 47	23 23	7 10	17 30	24 11 31	24 16	9 36
13	0 28	8 12	23 5	23 51	9 5	23 37	24 11	4 8	9 13
19	0 44	8 28	24 11	24 19	12 2	29 44	23 52	7 8	8 50
25	1 0	8 44	24 23	24 47	15 8	5 50	3 34	4 32	8 28

1790.

January.

9

Days	Day lig. begins	Day lig. ends	Durat. twilig.	Pl. D's node	h's latitude	4's latitude	δ's latitude	♀'s latitude	♂'s latitude
1	5 59	6 1	2 6	107 136	2 s 8	1 n 3	3 n 32	1 s 10	1 s 43
7	5 56	6 4	2 4	16 17	2 7	1 5	3 46	0 39	2 1
13	5 52	6 8	2 2	15 58	2 6	1 6	3 59	0 2	2 6
19	5 46	6 14	2 0	15 39	2 5	1 7	4 11	0 11 40	1 54
25	5 39	6 21	1 58	15 20	2 4	1 9	4 21	1 28	1 20

Days	☉'s longitude	☽'s long.	☽'s latitude	h's long.	4's long.	δ's long.	♀'s long.	♂'s long.
1	11 23 7	14 56 4	4 s 14	18 10	0 n 56	1 R 59	28 30	9 18
2	12 24 17	28 9	4 47	18 15	0 53	1 m 59	29 33	11 25
C	13 25 26	12 27	5 4	18 20	0 49	1 58	0 35	13 2
4	14 26 35	20 51	5 1	18 24	0 46	1 56	1 36	14 40
5	15 27 45	11 16	4 40	18 29	0 42	1 53	2 37	16 18
6	16 28 55	25 36	4 1	18 33	0 39	1 50	3 39	17 56
7	17 30 4	9 49	3 7	18 38	0 35	1 46	4 40	19 35
8	18 31 14	23 53	2 2	18 43	0 31	1 41	5 40	21 14
9	19 32 24	7 47	0 51	18 48	0 26	1 35	6 40	22 54
C	20 33 33	21 31	0 11 2	18 53	0 22	1 28	7 39	24 34

11	21 34 42	5 5	1 33	18 58	0 17	1 20	8 38	26 14
12	22 35 52	18 30	2 38	19 3	0 12	1 12	9 37	27 55
13	23 37 1	1 45	3 33	19 8	0 7	1 3	10 35	29 37
14	24 38 9	14 48	4 16	19 13	0 2	2 29 53	11 33	1 10
15	25 39 17	27 39	4 45	19 18	20 56	29 42	12 30	3 1
16	26 40 24	10 18	5 0	19 24	29 51	29 30	13 26	4 44
C	27 41 31	22 43	5 0	19 29	29 45	29 17	14 21	6 26
18	28 42 37	4 55	4 46	19 34	29 40	29 4	15 16	8 9
19	29 43 42	16 57	4 19	19 40	29 34	29 51	16 10	9 52
20	0 44 46	28 50	3 42	19 45	29 28	29 37	17 4	11 34

21	1 45 49	10 39	2 55	9 51	29 21	29 22	17 57	13 17
22	2 46 51	22 28	2 19	57	29 15	29 6	18 49	15 0
23	3 47 51	4 2	1 0	20 3	29 8	28 50	19 40	16 42
C	4 48 50	16 27	0 s 3	20 9	29 2	28 33	20 31	18 23
25	5 49 48	28 47	1 8	10 15	28 55	28 14	21 22	20 3

26	6 50 44	11 33	2 12	20 21	28 48	27 56	22 12	21 42
27	7 51 39	24 41	3 10	20 27	28 41	27 37	23 0	23 19
28	8 52 33	8 17	4 0	20 33	28 34	27 17	23 47	24 53
29	9 53 26	22 20	4 37	20 40	28 27	26 57	24 32	26 25
30	10 54 17	6 46	4 57	20 46	28 20	26 36	25 27	27 54
C	11 55 7	21 20	4 58	20 52	28 13	26 14	26 1	29 20

Days	☿'s rises	♂'s rises	♀'s sets	♂'s f-s	h's declin.	4's declin.	δ's declin.	♀'s declin.	♂'s declin.
1	8 a 14	8 a 12	8 a 11	3 a 37	6 s 39	12 n 8	14 n 5	1 s 6	24 s 49
7	7 47	7 43	8 21	3 57	6 27	12 17	14 23	0 24	24 2
13	7 18	7 11	8 31	4 27	6 14	12 28	14 50	7 38	22 18
19	6 48	6 38	8 39	5 2	6 1	12 41	15 26	4 51	19 37
25	6 19	6 2	8 45	5 38	5 45	12 56	16 10	2 51	16 5

10 February hath xxviii Days. White.

The LUNATIONS.

Last quarter the 6^h day, at 0 minutes past 11 morning.
 New Moon the 14^h day, at 9 minutes bef. 1 morning.
 First quarter the 22^d day, at 8 minutes past 6 morning.

M D	Sundays & other remark. days	☉ rises	☉ sets	☉'s declin.	☾'s declin.	☾ rises & sets	☾ south	Clock bef. ☉	
1	Purif. Candlem.	7 26	4 34	16 57	4 n 52	7 a 26	1 m 0	14' 6"	
2		7 25	4 35	16 40	0 s 13	8 48	1 54	14 13	
3	Bl'a'e	7 23	4 37	16 22	5 14	10 8	2 47	14 19	
4		7 21	4 39	16 4	9 53	11 29	3 41	14 24	
5	Agatha	7 19	4 41	15 46	13 53	morn	4 35	14 29	
6		7 18	4 42	15 27	17 1	0 44	5 29	14 32	
C	Sexagesima S.	7 16	4 44	15 8	19 6	1 56	6 24	14 35	
8		7 14	4 46	14 49	20 5	3 0	7 19	14 37	
9		7 12	4 48	14 30	19 57	3 56	8 13	14 39	
10		7 10	4 50	14 11	18 46	4 43	9 5	14 39	
11		7 9	4 51	13 51	16 40	5 22	9 55	14 39	
12	Hil. Term ends	7 7	4 53	13 31	13 49	5 53	10 43	14 38	
13	Old Cand. D.	7 5	4 55	13 11	10 24	6 18	11 29	14 36	
C	Quinq. Shro. S.	Valent.	4 57	12 50	6 35	(sets)	0 a 13	14 34	
15		7 1	4 59	12 30	2 33	6 a 56	0 56	14 31	
16	Shrove Tuesday	6 59	5 1	12 9	1 n 32	8 2	1 38	14 27	
17	Ash Wednesday	6 57	5 3	11 48	5 32	9 5	2 20	14 22	
18		6 55	5 5	11 27	9 18	10 10	3 3	14 17	
19		6 53	5 7	11 5	12 43	11 13	3 47	14 11	
20		6 52	5 8	10 44	15 38	morn	4 32	14 4	
C	1 Sun. in Lent	6 50	5 10	10 22	17 55	0 14	5 20	13 57	
22		6 48	5 12	10 0	19 25	1 14	6 10	13 49	
23		6 46	5 14	9 38	20 0	2 13	7 3	13 40	
24	St. Matthias Pr.	6 44	5 16	9 16	19 33	3 8	7 57	13 31	
25	[A.F.b.Em.W.]	6 42	5 18	8 54	17 58	3 53	8 52	13 21	
26		6 40	5 20	8 31	15 17	4 33	9 48	13 10	
27		6 38	5 22	8 9	11 35	5 9	10 44	12 59	
C	2 Sund. in Lent	6 36	5 24	7 46	7 5	5 39	11 39	12 47	
Days	Day increaf.	Length of day	Helioc. long. ♀	Helioc. long. ♂	Helioc. long. ♂	Helioc. long. ☉	Helioc. long. ♀	Helioc. long. ♀	h fers
1	1 24	9 8	24 37	25 20	18 13	12 55	14 55	13 8 9	8 a 4
7	1 41	9 28	24 9	25 48	20 51	19 0	24 39	20 11 28	7 43
13	2 6	9 50	25 12	26 16	23 29	25 44	24 27	27 14	7 24
19	2 30	10 14	25 13	26 44	26 7	1 12	7 14	29 21	7 5
25	2 52	10 36	25 25	27 12	28 44	7 9	23 54	25 57	6 47

1790.

February.

II

Days	Day lig. begins	Day lig. ends	Durat. twilig.	Pl. D's node	h's latitude	u's latitude	♂'s latitude	♀'s latitude	♂'s latitude
1	5 31	6 29	1 55	14m58	2 s 4	1 n 10	4 n 29	2 n 31	0 s 6
7	5 22	6 38	1 54	14 30	2 3	1 11	4 33	3 30	1 n 25
13	5 12	6 48	1 52	14 20	2 3	1 11	4 31	4 34	2 58
19	5 1	6 59	1 52	14 1	2 3	1 12	4 27	5 40	3 44
25	4 50	7 10	1 52	13 42	2 2	1 12	4 18	6 45	3 19

Days	☉'s longitude	D's long.	D's latitude	h's long.	u's long.	♂'s long.	♀'s long.	♂'s long.
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1	12 55 57	6m21	4 s 40	20X59	28Ω 5	25Ω51	26X45	0X42
2	13 56 45	21 13	4 2 21	5 27	58 25	28 27	26 1	59
3	14 57 32	5m56	3 8 21	12 27	50 25	5 23	6 3	9
4	15 58 18	20 26	2 3 21	18 27	43 24	42 28	45 4	11
5	16 59 3	4m38	0 52 21	25 27	35 24	19 29	24 5	7
6	17 59 47	18 31	0 n 22	21 31	27 27	23 56	0Y 2	5 55
C	19 0 30	2 4 8	1 32 21	38 27	19 23	33 0	39 6	35
8	20 1 12	15 27	2 36 21	44 27	12 23	10 1	14 7	5
9	21 1 53	28 33	3 31 21	51 27	4 22	46 1	47 7	26
10	22 2 33	11 27	4 13 21	58 26	56 22	22 2	18 7	36
11	23 3 11	24 9	4 41 22	4 26	48 21	51 2	48 7	R36
12	24 3 48	6m41	4 58 22	11 26	40 21	34 3	16 7	25
13	25 4 24	19 3	4 59 22	18 26	32 21	10 3	43 7	3
C	26 4 58	1X16	4 46 22	25 26	24 20	46 4	48 6	32
15	27 5 31	13 20	4 20 22	32 26	16 20	23 4	31 5	52
16	28 6 2	25 16	3 43 22	39 26	8 20	0 4	52 5	4
17	29 6 31	7Y 7	2 57 22	46 26	0 19	37 5	11 4	10
18	X 0 6 58	18 54	2 3 22	53 25	52 19	14 5	28 3	10
19	1 7 24	0 8 42	1 3 23	0 25	44 18	51 5	44 2	5
20	2 7 48	12 34	0 1 23	7 25	36 18	29 5	57 0	59
C	3 8 10	24 37	1 s 3	23 14	25 28	18 8	6 8	29 54
22	4 8 29	6 11 55	2 5 23	21 25	21 17	47 6	17 28	50
23	5 8 46	19 34	3 3 23	28 25	13 17	37 6	23 27	50
24	6 9 1	2 38	3 54 23	36 25	5 17	6 6	27 26	53
25	7 9 14	16 11	4 31 23	43 24	58 16	46 6	R29 25	58
26	8 9 25	0Ω 14	4 57 23	50 24	50 16	27 6	28 25	10
27	9 9 34	14 45	5 3 23	57 24	43 16	9 6	2 24	30
C	10 9 41	29 38	4 50 24	4 24	35 15	51 6	19 23	57

Days	u's rises	♂'s rises	♀'s sets	♂'s f-ets	h's declin.	u's declin.	♂'s declin.	♀'s declin.	♂'s declin.
1	5 a 46	5 a 20	8 a 51	6 a 14	5 s 29	13 n 15	17 n 8	1 n 1	11 s 20
7	5 18	4 42	8 52	6 29	5 13	13 31	17 58	3 28	7 47
13	4 49	fets	8 48	6 13	4 56	13 48	18 44	5 40	6 11
19	fets	7 m 6	8 40	rises	4 39	14 5	19 25	7 29	7 17
25	6 m 32	6 37	8 25	5 m 54	4 22	14 21	19 56	8 46	9 50

The LUNATIONS.

Full Moon the 1st day, at 53 minutes past 5 morning.
 Last quarter the 7th day, at 37 minutes past 9 evening.
 New Moon the 15th day, at 47 minutes past 6 evening.
 First quarter the 23d day, at 44 minutes past 9 evening.
 Full Moon the 30th day, at 18 minutes past 3 afternoon.

M	Sundays & other	☉	☉	☉'s	☉'s	☉rises	☉	Clock
D	remark. days	rises	sets	declin.	declin.	& sets	South	bef. ☉
1	David	6 34	5 26	7 8 23	2 n 4	☉rises	morn	12 35
2	Chad.	6 32	5 28	7 0	3 s 6	7 a 45	0 35	12 23
3		6 30	5 30	6 37	8 3	9 7	1 31	12 9
4		6 28	5 32	6 14	12 26	10 27	2 27	11 46
5		6 26	5 34	5 51	15 57	11 44	3 23	11 42
6		6 24	5 36	5 28	18 24	morn	4 20	11 27
7	☉ 3 Sund. in Lent	Perpet.	5 38	5 5	19 42	0 52	5 16	11 13
8		6 20	5 40	4 41	19 50	1 52	6 11	10 58
9		6 18	5 42	4 18	18 55	2 43	7 5	10 42
10		6 16	5 44	3 54	17 3	3 24	7 56	10 26
11		6 14	5 46	3 31	14 25	4 0	8 45	10 10
12	Gregory	6 12	5 48	3 7	11 11	4 28	9 32	9 54
13		6 10	5 50	2 44	7 32	4 54	10 17	9 37
14	☉ Midlent Sund.	6 8	5 52	2 20	3 37	5 17	11 0	9 20
15		6 6	5 54	1 56	0 n 24	☉sets	11 42	9 3
16		6 4	5 56	1 32	4 23	7 a 1	0 a 24	8 45
17	St. Patrick	6 2	5 58	1 9	8 12	8 5	1 7	8 28
18	Edm. K. W. S.	6 0	6 0	0 45	11 42	9 9	1 51	8 10
19		5 58	6 2	0 21	14 44	10 12	2 36	7 52
20		5 56	6 4	0 n 2	17 10	11 12	3 22	7 24
21	☉ 5 Sund. in Lent	Benec.	6 6	0 26	18 52	morn	4 11	7 15
22		5 52	6 8	0 50	19 43	0 10	5 2	6 57
23		5 50	6 10	1 13	19 36	1 4	5 54	6 38
24		5 48	6 12	1 37	18 28	1 52	6 47	6 20
25	Lady Day	5 46	6 14	2 0	16 18	2 34	7 41	6 1
26	Cam. T. ends	5 44	6 16	2 24	13 8	3 10	8 35	5 42
27	Oxf. T. ends	5 42	6 18	2 47	9 5	3 42	9 29	5 24
28	☉ Palm Sunday	5 40	6 20	3 11	4 2	4 12	10 24	5 5
29		5 38	6 21	3 34	0 s 40	4 42	11 20	4 46
30		5 36	6 23	3 57	5 45	☉rises	morn	4 27
31		5 34	6 24	4 21	10 28	8 a 6	0 17	4 9
Days	Day	Length	Helioc.	Helioc.	Helioc.	Helioc.	Helioc.	Helioc.
	increaf.	of day	long. ♀	long. ♂	long. ♂	long. ☉	long. ♀	long. ☉
1	3 18	10 52	25 33	17 33	0 20	11 10	0 25	1 12 8
2	3 32	11 16	25 4	17 58	3 6	17 10	10 1	1 12 12
3	3 56	11 4	25 5	18 26	5 43	23 9	9 5	19 8
4	4 29	12 4	26 1	18 54	8 20	29 6	29 38	5 57 rises
5	4 44	12 28	26 21	19 22	10 58	5 3	9 20	22 26 m 2

1790.

March.

13

Days	Day lig. begins	Day lig. ends	Durat. twilig.	Pl. D's node	h's latitude	u's latitude	♂'s latitude	♀'s latitude	♂'s latitude
1	4 43	7 17	1 51	13m2	2 s 2	1 n 12	4 n 12	7 n 24	2 n 26
7	4 30	7 30	1 52	13 1	2 2	1 12	4 c	8 11	1 2
13	4 17	7 43	1 53	12 51	2 3	1 12	3 47	8 34	0 s 13
19	4 4	7 56	1 54	12 32	2 3	1 12	3 33	8 30	1 13
25	3 50	8 10	1 56	12 13	2 3	1 11	3 10	7 43	1 56
Days	☉'s longitude	D's long.	D's latitude	h's long.	u's long.	♂'s long.	♀'s long.	♂'s long.	♀'s long.
1	X 11 9 45	14m46	4 s 16	24X12	24Ω28	15Ω34	6V10	23m30	
2	12 9 48	29 58	3 24	24 19	24 21	15 17	5 58	23 10	
3	13 9 49	15 3	2 17	24 27	24 14	15 1	5 44	22 57	
4	14 9 49	29 54	1 3	24 34	24 7	14 46	5 28	22 50	
5	15 9 47	14m23	on 15	24 42	24 0	14 32	5 10	22D50	
6	16 9 44	28 29	1 20	24 49	23 53	14 19	4 50	22 56	
C	17 9 39	12 11	2 36	24 57	23 46	14 7	4 27	23 9	
8	18 9 32	25 30	3 33	25 4	23 39	13 55	4 2	23 27	
9	19 9 24	8 30	4 17	25 11	23 31	13 44	3 35	23 49	
10	20 9 14	21 12	4 48	25 19	23 26	13 31	3 6	24 17	
11	21 9 2	3m41	5 4	25 26	23 20	13 23	2 35	24 50	
12	22 8 48	15 59	5 6	25 33	23 14	13 14	2 8	25 27	
13	23 8 33	28 7	4 54	25 41	23 8	13 6	1 27	26 7	
C	24 8 16	10X8	4 29	25 48	23 2	12 59	0 51	26 51	
15	25 7 57	22 4	3 52	25 56	22 56	12 53	0 14	27 39	
16	26 7 36	3V55	3 5	26 3	22 51	12 48	29X36	28 31	
17	27 7 13	15 43	2 11	26 11	22 45	12 43	28 58	29 26	
18	28 6 48	27 31	1 11	26 18	22 39	12 38	28 21	0X24	
19	29 6 21	9 20	0 7	26 26	22 34	12 34	27 44	1 24	
20	V 0 5 51	21 16	0 s 58	26 33	22 29	12 32	27 7	2 26	
C	1 5 19	3 11	2 126	40	22 25	12 31	26 31	3 31	
22	2 4 44	15 38	2 59	26 48	22 20	12 31	25 55	4 39	
23	3 4 7	28 14	3 51	26 55	22 16	12 30	25 20	5 49	
24	4 3 28	11 13	4 32	27 2	22 11	12D30	24 46	7 1	
25	5 2 46	24 38	5 0	27 10	22 7	12 30	24 13	8 15	
26	6 2 2	8Ω32	5 12	27 17	22 3	12 31	23 43	9 31	
27	7 1 16	22 54	5 5	27 25	21 59	12 33	3 15	10 49	
C	8 0 27	7m40	4 38	27 32	21 55	12 36	22 48	12 9	
29	8 59 36	22 46	3 51	27 40	21 52	12 40	22 23	13 31	
30	9 58 43	8 1	2 48	27 47	21 48	12 45	21 59	14 54	
31	10 57 48	23 15	1 32	27 55	21 44	12 51	1 37	16 19	
Days	♂'s fets	♀'s fets	♀'s fets	♂'s rises	h's declin.	u's declin.	♂'s declin.	♀'s declin.	♂'s declin.
1	6 m 16	6 m 20	8 a 11	5 m 39	4 s 10	14 n 31	20 n 11	9 n 15	11 s 24
7	5 52	5 52	7 41	5 28	3 53	14 45	20 26	9 17	12 50
13	5 29	5 27	7 4	5 22	3 3	14 57	20 31	8 26	13 2
19	5 7	5 2	rises	5 1	3 18	15 8	20 27	6 54	12 8
25	4 44	4 39	5 m 35	5 14	3 c	15 17	20 15	4 47	10 17

The LUNATIONS.

Last quarter the 6th day, at 3 minutes past 10 morning.

New Moon the 14th day, at 29 minutes past 12 noon.

First quarter the 22d day, at 4 minutes past 9 morning.

Full Moon the 28th day, at 55 minutes past 11 night.

M D	Sundays & other remark. days	☉ rises	☉ sets	☉'s declin.	☾'s declin.	☾ rises & sets	☾ South	Clock bef. ☉	
1	Maundy Th.	5 33	6 27	4 n 44	14 s 28	9 a 26	1 m 14	3' 50"	
2	Good Friday	5 31	6 29	5 7	17 26	10 41	2 12	3 32	
3	Richard	5 29	6 31	5 30	19 12	11 49	3 11	3 14	
4	Easter Day	St Ann.	6 33	5 53	19 44	morn	4 10	2 56	
5	Easter Monday	O. L. D.	6 35	6 15	19 6	0 45	5 6	2 38	
6	Easter Tuesday	5 23	6 37	6 38	17 27	1 30	5 59	2 20	
7		5 21	6 39	7 0	15 0	2 8	6 50	2 3	
8		5 19	6 41	7 20	11 55	2 39	7 38	1 46	
9		5 17	6 43	7 45	8 22	3 4	8 23	1 29	
10		5 15	6 45	8 7	4 32	3 28	9 6	1 12	
11	Low Sunday	5 13	6 47	8 29	0 34	3 50	9 49	0 56	
12		5 11	6 49	8 51	3 n 24	4 11	10 31	0 40	
13		5 9	6 51	9 13	7 15	4 34	11 14	0 24	
14	Ox. & Ca. T. beg.	5 7	6 53	9 35	10 49	(sets	11 57	0 9	
15		5 5	6 55	9 56	13 58	8 a 12	0 a 42	0 af. 6	
16		5 4	6 56	10 17	16 34	9 14	1 28	0 21	
17		5 2	6 58	10 38	18 27	10 13	2 16	0 35	
18	2 S. aft. Easter	5 0	7 0	10 59	19 30	11 8	3 6	0 49	
19	Alphege	4 58	7 2	11 20	19 38	11 57	3 57	1 2	
20		4 56	7 4	11 41	18 47	morn	4 49	1 15	
21	Easter T. beg.	4 54	7 6	12 1	16 56	0 40	5 41	1 28	
22		4 52	7 8	12 21	14 9	1 17	6 33	1 40	
23	St. George	4 50	7 10	12 41	10 32	1 49	7 25	1 52	
24		4 48	7 11	13 1	6 13	2 18	8 17	2 4	
25	3 S. af. East. St.	4 47	7 13	13 20	1 26	2 46	9 10	2 15	
26	Mar. Pra. M. b.	4 45	7 15	13 40	3 s 32	3 13	10 5	2 25	
27		4 43	7 17	13 59	8 22	3 44	11 2	2 35	
28		4 41	7 19	14 18	12 42	(rises	12 0	2 45	
29		4 40	7 20	14 36	16 11	8 a 2	morn	2 54	
30		4 38	7 22	14 55	18 32	9 34	1 0	3 2	
Days	Day increaf.	Length of day	Helioc. long. ♀	Helioc. long. ♀	Helioc. long. ♂	Helioc. long. ☉	Helioc. long. ♀	Helioc. long. ♂	H rises
1	5 19	12 54	26 35	29 54	14 12	11 57	20 37	12 17	5 m 19
7	5 34	13 18	26 47	0 22	16 40	17 51	0 m 16	0 43	4 58
13	5 58	13 42	26 59	0 5	19 18	23 43	9 53	21 29	4 38
19	6 20	14 4	27 11	1 18	21 57	29 35	19 29	15 49	4 17
25	6 42	14 26	27 23	1 36	24 36	5 m 25	29 3	14 56	3 55

1790.

April.

15

Days	Day lig. begins	Day lig. ends	Durat. twilig.	Pl. D's node	h's latitude	u's latitude	♂'s latitude	♀'s latitude	♂'s latitude
1	3 32	8 28	2 0	11m50	2 s 3	1 n 11	3 n 2	6 n 24	2 s 24
7	3 16	8 44	2 4	11 31	2 4	1 10	2 49	5 6	2 29
13	3 0	9 0	2 9	11 12	2 5	1 9	2 30	3 48	2 15
19	2 43	9 17	2 14	10 53	2 5	1 8	2 24	2 35	1 44
25	2 26	9 34	2 20	10 34	2 6	1 8	2 13	1 29	0 55
Days	☉'s longitude		D's long.	D's latitude	h's long.	u's long.	♂'s long.	♀'s long.	♂'s long.
1	γ 11	56 51	8m19	0 s 1	28 22	12 41	12 58	21 17	17 46
2	12	55 52	23 4	1 n 10	28 9	21 38	13 5	21 19	14
3	13	54 51	7 1 25	2 24	28 16	21 36	13 13	20 47	20 44
4	14	53 49	21 19	3 27	28 24	21 33	13 21	20 35	22 15
5	15	52 45	4 47	4 17	28 31	21 31	13 30	20 26	23 48
6	16	51 39	17 50	4 51	28 38	21 29	13 38	20 19	25 23
7	17	50 32	0 33	5 11	28 45	21 27	13 47	20 15	26 59
8	18	49 23	12 57	5 15	28 52	21 25	13 57	20 13	28 37
9	19	48 12	25 8	5 5	29 0	21 24	14 6	20 10	29 17
10	20	46 59	7 8	4 41	29 7	21 23	14 19	20 16	1 58
11	21	45 45	19 2	4 6	29 14	21 22	14 31	20 22	3 40
12	22	44 29	0 52	3 20	29 21	21 21	14 43	20 31	5 24
13	23	43 11	12 40	2 26	29 28	21 20	14 56	20 42	7 10
14	24	41 51	24 29	1 25	29 35	21 19	15 5	20 55	8 57
15	25	40 30	6 20	0 20	29 42	21 19	15 23	21 10	10 46
16	26	39 6	18 16	0 s 46	29 49	21 18	15 37	21 26	12 36
17	27	37 40	0 120	1 50	29 56	21 18	15 52	21 44	14 28
18	28	36 12	12 33	2 51	0 32	21 18	16 7	22 31	16 22
19	29	34 42	24 59	3 44	0 9	21 19	16 23	22 24	18 17
20	30	33 10	7 40	4 28	0 16	21 19	16 39	22 47	20 14
21	1	31 35	20 40	5 0	0 23	21 20	16 56	23 11	22 12
22	2	29 58	4 1	5 16	0 30	21 21	17 13	23 38	24 12
23	3	28 19	17 46	5 15	0 36	21 22	17 31	24 7	26 13
24	4	26 38	1m254	4 55	0 43	21 23	17 49	24 37	28 16
25	5	24 55	16 24	4 16	0 49	21 25	18 7	25 9	0 21
26	6	23 10	1 13	3 20	0 56	21 27	18 26	25 42	2 27
27	7	21 23	16 14	2 9	1 2	21 29	18 45	26 16	4 34
28	8	19 34	1m20	0 48	1 9	21 31	19 5	26 51	6 41
29	9	17 43	16 21	0 n 35	1 15	21 33	19 25	27 27	8 49
30	10	15 51	1 9	1 55	1 22	21 35	19 45	28 51	10 59
Days	u's fets	♂'s fets	♀'s rises	♂'s rises	h's declin.	u's declin.	♂'s declin.	♀'s declin.	♂'s declin.
1	4 m 18	4 m 12	5 m 13	5 m 9	2 s 40	15 n 24	19 n 51	2 n 26	7 s 3
7	3 55	3 51	4 59	5 4	5 4	15 28	19 24	0 49	3 28
13	3 33	3 30	4 46	4 57	4 57	15 30	18 52	0 s 12	0 n 47
19	3 11	3 9	4 36	4 51	4 51	15 30	18 14	0 39	5 35
25	2 48	2 50	4 25	4 47	4 36	15 27	17 31	0 34	10 45

The LUNATIONS.

Left quarter the 6^h day, at 51 minutes bef. 1 morning.
 New Moon the 14th day, at 36 minutes past 4 morning.
 First quarter the 21st day, at 46 minutes past 4 afternoon.
 Full Moon the 28th day, at 15 minutes past 8 morning.

M		Sundays & other D remark. days	☉ rises	☉ sets	☉'s declin.	☽'s declin.	☽ rises & sets	☽ South	Clock aft. ☉	
1		St. Phil. and Ja.	4 36	7 24	15 n 13	19 s 37	10 a 37	2 m 0	3 10	
2	C	S. af. Easter	4 34	7 26	15 31	19 26	11 30	2 58	3 17	
3		Inven. of Crois	4 33	7 27	15 48	18 6	morn	3 55	3 24	
4			4 31	7 21	16 6	15 50	0 11	4 48	3 30	
5			4 29	7 31	16 23	12 51	0 46	5 38	3 36	
6		St. John A.P.L.	4 27	7 33	16 40	9 27	1 14	6 25	3 41	
7			4 26	7 34	16 56	5 35	1 37	7 9	3 45	
8			4 24	7 36	17 13	1 37	2 1	7 52	3 49	
9	C	Rogation Sun.	4 23	7 37	17 29	2 n 22	2 21	8 34	3 53	
10			4 21	7 39	17 44	6 15	2 43	9 16	3 55	
11			4 19	7 41	18 0	9 54	3 5	9 59	3 57	
12		Old May Day	4 18	7 42	18 15	13 11	3 29	10 43	3 59	
13		Asc. H. Thurs.	4 16	7 44	18 30	15 57	3 58	11 29	4 0	
14			4 15	7 45	18 44	18 3	((sets	0 a 16	4 0	
15			4 13	7 47	18 59	19 20	9 a 6	1 6	4 0	
16	C	S. after Ascen.	4 12	7 48	19 12	19 42	9 50	1 57	3 59	
17		Easter T. ends.	4 10	7 50	19 26	19 5	10 42	2 48	3 58	
18			4 9	7 51	19 39	17 23	11 21	3 40	3 56	
19		O. Charlott. b.	Dunst.	7 52	19 52	14 56	11 54	4 31	3 53	
20		Oxf. Term ends	4 6	7 54	20 5	11 33	morn	5 22	3 50	
21			4 5	7 55	20 17	7 30	0 23	6 13	3 47	
22		Prs. Eliz. b.	4 4	7 56	20 29	2 53	0 55	7 4	3 43	
23	C	Whit Sunday	4 2	7 58	20 40	1 s 50	1 17	7 56	3 38	
24		Whit Monday	4 1	7 59	20 51	6 36	1 44	8 50	3 33	
25		Whit Tuesday	4 0	8	21 2	11 3	2 13	9 45	3 28	
26		Ember Week	Auguit.	8	1 21	13	14 51	2 44	10 43	
27		Vene. Bede	3 58	8	2 21	23	17 41	3 23	11 42	
28			3 57	8	3 21	32	19 20	((rises	morn	
29		K. Ch. 2. rector.	3 55	8	5 21	42	19 42	9 a 17	0 41	
30	C	Trinity Sunday	3 54	8	6 21	51	18 49	10 4	1 39	
31			3 53	8	7 21	58	16 52	10 43	2 35	
	Days	Day increaf.	Length of day	Helioc. long. ♀	Helioc. long. ♀	Helioc. long. ♂	Helioc. long. ☉	Helioc. long. ♀	Helioc. long. ♂	h rises
1		7 4	14 48	27 35	27 14	27 16	11 14	8 35	10 8	3 m 33
7		7 24	15 8	27 47	2 42	29 57	17 2	18 7	26 11	53
13		7 44	15 28	27 59	3 9	2 39	21 52	7 3	30 4	2 49
19		8 0	15 44	28 11	3 37	5 20	28 36	7 7	4 15	2 26
25		8 10	16 c	28 28	4 5	8 3	4 22	16 36	0 c	2 3

1790.

May.

17

Days	Day lig. begins	Day lig. ends	Durat. twilig.	Pl. D's node	h's latitude	U's latitude	δ's latitude	♀'s latitude	♂'s latitude
1	2 7 9 55	2 31	10m 15	2 s 7	1 n 7	2 n 2	0 32	0 n 6	
7	1 45 10 18	2 43	9 56	2 8	1 6	1 52	0 s 16	1 8	
13	1 20 10 45	3 1	9 37	2 9	1 5	1 43	0 56	1 55	
19	0 48 11 20	3 27	9 18	2 10	1 4	1 34	1 29	2 17	
25	All day light.			8 50	2 12	1 4	1 25	1 54	2 9
M	☉'s longitude		☽'s long.	☽'s latitude	h's long.	U's long.	δ's long.	♀'s long.	♂'s long.
1	8 11 13 57	15 23	3 n 5	1 28	21 38	20 6	28 44	13 8	
C	12 12 2	29 40	4 2	1 35	21 41	20 27	29 24	15 18	
3	13 10 5	13 28	4 44	1 41	21 44	20 48	0 25	17 28	
4	14 8 7	26 28	5 9	1 47	21 4	21 10	0 47	19 38	
5	15 6 7	9 11	5 18	1 53	21 50	21 32	1 30	21 47	
6	16 4 6	21 42	5 11	1 59	21 53	21 54	2 14	23 55	
7	17 2 4	3 5	4 51	2 5	21 56	22 17	3 0	26 2	
8	18 0 1	15 51	4 18	2 11	22 0	22 40	3 46	28 7	
C	18 57 57	27 42	3 34	2 17	22 4	23 3	4 33	0 11	10
10	19 55 51	9 20	2 41	2 23	22 8	23 26	5 21	2 12	
11	20 53 44	21 18	1 43	2 29	22 12	23 50	6 9	4 12	
12	21 51 36	3 8	0 39	2 35	22 16	24 14	6 58	6 9	
13	22 49 27	15 8	0 s 28	2 40	22 21	24 38	7 48	8 3	
14	23 47 16	27 15	1 33	2 46	22 26	25 2	8 38	9 54	
15	24 45 4	9 11	2 36	2 51	22 31	25 27	9 29	11 43	
C	25 42 50	22 0	3 32	2 57	22 36	25 52	10 20	13 29	
17	26 40 35	4 42	4 18	3 2	22 41	26 18	11 12	15 12	
18	27 38 18	17 37	4 52	3 7	22 46	26 44	12 5	16 52	
19	28 35 59	0 48	5 12	3 12	22 51	27 10	12 59	18 29	
20	29 33 39	14 14	5 15	3 18	22 57	27 36	13 53	20 3	
21	II 0 31 17	27 57	5 0	3 23	23 3	28 3	14 48	21 33	
22	1 28 54	11 56	4 28	3 28	23 9	28 29	15 43	22 59	
C	2 26 29	26 11	3 39	3 33	23 15	28 56	16 39	24 22	
24	3 24 3	10 40	2 35	3 38	23 21	29 23	17 35	25 42	
25	4 21 35	25 19	1 10	3 43	23 27	29 50	18 31	27 0	
26	5 19 6	10m 3	0 n 0	3 48	23 33	0 n 17	19 28	28 14	
27	6 16 36	24 46	1 21	3 53	23 40	0 45	20 25	29 23	
28	7 14 5	9 22	2 38	3 57	23 47	1 13	21 23	0 29	
29	8 11 33	23 43	3 38	4 2	23 51	1 41	22 21	1 32	
C	9 9 0	7 45	4 26	4 7	24 1	2 9	23 19	2 31	
31	10 6 26	21 24	4 57	4 11	24 8	2 38	24 18	3 26	
Days	U's sets	δ's sets	♀'s rises	♂'s sets	h's declin.	U's declin.	δ's declin.	♀'s declin.	♂'s declin.
1	2m 26	2 m 30	3m 14	7 a 35	1 s 21	15 n 22	16 n 44	0 n 0	15 n 54
7	2 3	2 10	3 4	8 31	1 8	15 15	15 52	0 57	20 23
13	1 41	1 5	2 53	9 20	0 50	15 6	14 56	2 14	23 34
19	1 18	1 31	2 41	9 54	0 43	14 56	13 56	3 46	25 14
25	0 55	1 11	2 30	10 10	0 37	14 48	12 52	5 20	25 35

B

The LUNATIONS.

Last quarter the 4th day, at 50 minutes past 3 Afternoon.
 New Moon the 12th day, at 10 minutes past 6 evening.
 First quarter the 19th day, at 5 minutes past 10 night.
 Full Moon the 26th day, at 58 minutes past 4 afternoon.

M	D	Sundays & other remark. days.	☉ rises	☉ sets	☉'s declin.	D's declin.	D rises & sets	D South	Clock aft. ☉
	1	Nicomede	3 52	8 8	22 n 8	14 s 4	11 a 13	3 m 28	2' 36'
	2	Oxf. Term beg.	3 52	8 8	22 15	10 41	11 39	4 16	2 27
	3	Corpus Christ.	3 51	8 9	22 23	6 54	morn	5 2	2 18
	4	R. Geo. III. born.	Tr. T. b	8 10	22 30	2 56	o 3	5 46	2 8
	5	Pr. Er. Aug. b	Bonifa.	8 11	22 36	1 n 6	o 24	6 29	1 57
	6	T. S. M. L. M.	3 48	8 12	22 43	5 3	o 45	7 11	1 47
	7		3 48	8 12	22 49	8 48	1 8	7 54	1 36
	8		3 47	8 13	22 54	12 13	1 31	8 37	1 25
	9		3 46	8 14	22 59	15 10	1 56	9 21	1 13
	10		3 46	8 14	23 4	17 30	2 27	10 8	1 1
	11	St. Barnabas	3 45	8 15	23 8	19 4	3 3	10 57	o 49
	12	2 S. aft. Trin	3 45	8 15	23 12	19 44	D sets	11 48	o 37
	13		3 44	8 16	23 15	19 24	8 a 37	Q a 40	o 24
	14		3 44	8 16	23 18	18 3	9 19	1 32	o 12
	15		3 44	8 16	23 21	15 43	9 54	2 24	obef. 1
	16	St. Alban	3 44	8 16	23 23	12 30	10 25	3 16	o 14
	17		3 43	8 17	23 25	8 34	10 53	4 7	o 27
	18		3 43	8 17	23 26	4 9	11 18	4 57	o 40
	19	3 S. aft. Trin.	3 43	8 17	23 27	o s 32	11 43	5 47	o 53
	20	Ir. Ed.	8 17	23 28	5 14	morn	6 38	1 6	
	21	Longest day	3 43	8 17	23 28	9 42	o 9	7 31	1 19
	22	Trin. T. ends	3 43	8 17	23 28	13 38	9 37	8 26	1 32
	23	Nativ. J. Bapt.	3 43	8 17	23 27	16 45	1 14	9 23	1 44
	24	Midf.	8 17	23 26	18 50	1 54	10 21	1 57	
	25		3 43	8 17	23 24	19 43	2 43	11 10	2 10
	26	4 S. aft. Trin.	3 44	8 16	23 21	19 21	D rises	morn	2 22
	27		3 44	8 16	23 20	17 50	8 a 33	o 16	2 34
	28	St. Peter	3 44	8 16	23 17	15 21	9 8	1 10	2 47
	29		3 45	8 15	23 14	12 9	9 36	2 1	2 59
	30		3 45	8 15	23 11	8 28	9 59	2 49	3 10
Days	Day increaf.	Length of day	Helioc. long. ♀	Helioc. long. ♂	Helioc. long. ♂	Helioc. long. ☉	Helioc. long. ♀	Helioc. long. ♀	h rises
1	3 30	16 16	28 37	4 37	14 11	4 27	39 24	3 1	36
7	8 40	16 24	28 50	5 5	3 59	16 48	7 8	13 24	1 53
13	8 48	16 32	29 2	5 33	6 45	22 32	16 38	o 29	o 43
19	8 50	16 34	29 1	6 6	9 32	28 16	16 7	17 0	o 24
25	8 5	16 34	29 26	6 28	12 20	3 59	5 38	3 54	o 0

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June.

19

Day	Day lig. begins	Day lig. ends	Durat. twilig.	Pl. D's node	h's latitude	U's latitude	♂'s latitude	♀'s latitude	♂'s latitude
1				8m 37	2 14	1 n 3	1 n 10	2 17	1 n 23
7				8 27	2 15	1 2	1 9	2 29	0 12
13	All	day-	light	7 58	2 16	1 2	1 2	2 37	1 21
19				7 39	2 18	1 1	0 55	2 39	2 59
25				7 20	2 19	1 1	0 48	2 37	4 15
M D	☉'s longitude	☽'s long.	☽'s latitude	h's long.	U's long.	♂'s long.	♀'s long.	♂'s long.	♀'s long.
1	111 3 51	4 33	5 n 12	4 15	24 15	3 17	25 18	4 17	17
2	12 1 15	17 29	5 10	4 19	24 22	3 36	26 18	5 4	4
3	12 58 39	29 58	4 54	4 23	24 30	4 6	27 18	5 47	
4	13 56 2	12 10	4 24	4 27	24 38	4 35	28 19	6 26	
5	14 53 25	24 9	3 43	4 31	24 46	5 52	29 19	7 1	
6	15 50 48	6 1	2 53	4 35	24 54	5 34	0 19	7 32	
7	16 48 10	17 49	1 56	4 39	25 2	6 4	1 20	7 58	
8	17 45 32	29 39	0 54	4 43	25 10	6 34	2 21	8 20	
9	18 42 53	11 35	0 11	4 47	25 18	7 4	3 23	8 38	
10	19 40 14	23 41	1 16	4 50	25 27	7 35	4 25	8 51	
11	20 37 34	6 10	2 18	4 54	25 35	8 5	5 27	8 59	
12	21 34 54	18 33	3 15	4 58	25 43	8 35	6 30	9 3	
13	22 32 13	1 21	4 4	5 1	25 52	9 6	7 33	9 2	
14	23 29 31	14 24	4 40	5 4	26 1	9 37	8 36	8 57	
15	24 26 49	27 42	5 2	5 7	26 10	10 8	9 40	8 47	
16	25 24 6	11 12	5 8	5 10	26 19	10 39	10 44	8 33	
17	26 21 22	24 53	4 57	5 13	26 28	11 11	11 47	8 15	
18	27 18 38	8 45	4 28	5 16	26 37	11 42	12 51	7 54	
19	28 15 53	22 45	3 43	5 19	26 47	12 14	13 55	7 30	
20	29 13 7	6 52	2 44	5 22	26 56	12 46	15 0	7 3	
21	30 10 20	21 5	1 35	5 24	27 6	13 18	16 4	6 32	
22	1 7 32	5 23	0 19	5 27	27 15	13 51	17 9	5 58	
23	2 4 44	19 43	0 n 58	5 29	27 25	14 23	18 13	5 23	
24	3 1 56	4 1	2 11	5 32	27 35	14 55	19 18	4 48	
25	3 59 7	18 14	3 15	5 34	27 45	15 28	20 23	4 33	
26	4 56 18	2 16	4 6	5 36	27 55	16 1	21 29	3 38	
27	5 53 29	16 4	4 42	5 38	28 5	16 34	22 34	3 3	
28	6 50 39	29 33	5 1	5 40	28 15	17 7	23 40	2 29	
29	7 47 50	12 42	5 4	5 42	28 25	17 40	24 46	1 57	
30	8 45 1	25 31	4 51	5 44	28 35	18 13	25 52	1 29	
Days	U's sets	♂'s sets	♀'s rises	♂'s sets	h's declin.	U's declin.	♂'s declin.	♀'s declin.	♂'s declin.
1	om 28	om 47	2m 16	10 8	0 21	14 n 21	11 n 33	7 n 41	24 n 46
7	0 5	0 27	2 4	9 50	0 13	14 30	10 22	9 37	23 25
13	11 42	0 6	1 53	9 16	0 6	13 53	9 7	11 35	21 49
19	11 18	11 45	1 43	8 34	0 0	13 33	7 49	13 30	10 16
25	10 56	11 26	1 33	7 48	0 n 5	13 13	6 28	15 20	19 9

The LUNATIONS.

Last quarter the 4th day, at 45 minutes past 8 morning.

New Moon the 12th day, at 17 minutes past 5 morning.

First quarter the 19th day, at 35 minutes past 2 morning.

Full Moon the 26th day, at 5 minutes past 3 morning.

M D	Sundays & other remark. days	☉ rises	☉ sets	☉'s declin.	☾'s declin.	☾ rises & sets	☾ South	Clock bef. ☉	
1		3 46	8 14 23 n	7	4 s 29	10 a 22	3 m 34	3' 22	
2	Visit. of B.V.M.	3 46	8 14 23	2	0 25	10 43	4 17	3 33	
3	Dog days begin	3 47	8 13 22	57	3 n 36	11 5	5 0	3 44	
4	St. S. aft. Trin.	St. Mai	8 13 22	52	7 27	11 29	5 43	3 55	
5	Old Midsum	3 48	8 12 22	47	11 0	11 53	6 26	4 6	
6	Camb. Com.	3 49	8 11 22	41	14 7	morn	7 10	4 16	
7	Thos. a Becket	3 49	8 11 22	34	16 41	0 22	7 56	4 26	
8		3 50	8 10 22	28	18 32	0 56	8 44	4 35	
9	Camb. Ter. ends	3 51	8 9 22	20	19 32	1 36	9 34	4 44	
10		3 52	8 8 22	13	19 35	2 24	10 26	4 53	
11	St. S. aft. Trin.	3 53	8 7 22	5	18 36	3 21	11 19	5 1	
12	Oxford Aft	3 54	8 6 21	57	16 33	☾ sets	0 a 12	5 9	
13		3 55	8 5 21	48	13 34	8 a 23	1 5	5 17	
14		3 56	8 4 21	39	9 47	8 51	1 57	5 24	
15	Swithin	3 57	8 3 21	30	5 25	9 19	2 40	5 30	
16		3 58	8 2 21	20	0 41	9 45	3 40	5 36	
17	Oxf. T. ends	3 59	8 1 21	10	4 s 1	10 11	4 31	5 41	
18	St. S. aft. Trin.	4 0	8 0 20	59	8 32	10 39	5 23	5 46	
19		4 1	7 59 20	48	12 34	11 11	6 17	5 50	
20	Margaret	4 3	7 57 20	37	15 52	11 40	7 12	5 54	
21		4 4	7 56 20	25	18 13	morn	8 8	5 57	
22	Magdalen	4 5	7 55 20	14	19 28	0 33	9 5	6 0	
23		4 7	7 53 20	1	19 31	1 26	10 1	6 2	
24		4 8	7 52 19	49	18 26	2 26	10 56	6 3	
25	St. S. aft. Trin. St. James	7 51 19	36	16 20	3 32	11 48	6 4	6 4	
26	St. Anne	4 11	7 49 19	23	13 20	☾ rises	morn	6 4	
27		4 12	7 48 19	9	9 56	8 a 0	0 38	6 3	
28		4 14	7 46 18	55	6 3	8 25	1 25	6 2	
29		4 15	7 45 18	41	2 0	8 47	2 10	6 1	
30		4 17	7 43 18	27	2 n 3	9 9	2 53	5 59	
31		4 18	7 42 18	12	5 50	9 31	3 36	5 56	
Day	Day decreas	Length of day	Helioc. long. ♀	Helioc. long. ♂	Helioc. long. ♀	Helioc. long. ♂	Helioc. long. ♀	Helioc. long. ♂	h rises
1	0 6	16 28	29 38	6 56	25 10	9 42	15 8	10 22	11 a 37
7	0 12	16 22	29 50	7 23	28 15	25 24	40 10	51 11	12
13	0 24	16 10	0 2	7 51	0 53	21 9	4 13	3 16	10 47
19	0 36	15 58	0 14	8 19	3 47	26 53	13 46	29 53	10 23
25	0 52	15 42	0 26	8 46	6 42	2 36	23 20	18 44	9 50

1790.

July.

21

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The LUNATIONS.

Last quarter the 3d day, at 19 minutes past 2 morning.

New-Moon the 10th day, at 44 minutes past 2 afternoon.

First quarter the 17th day, at 45 minutes past 7 morning.

Full Moon the 24th day, at 36 minutes past 3 afternoon.

M	Sundays & other D remark. days	☉ rises	☉ sets	☉'s declin.	☽'s declin.	☽ rises & sets	☽ South.	Clock bef. ☉
1	S. aft. Trin.	Lammas	7 40	17 n 57	9 n 38	9 a 54	4 m 19	5' 53'
2		4 21	7 39	17 41	12 53	10 21	5 2	5 49
3		4 23	7 37	17 26	15 39	10 52	5 47	5 44
4		4 24	7 36	17 10	17 45	11 32	6 34	5 39
5		4 26	7 34	16 54	19 6	morn	7 23	5 33
6	Transfiguration	4 28	7 32	16 37	19 32	0 15	8 14	5 27
7	Fr. Amal. b.	N. of Jesus	31 16	20 18	59 1	6 9	6 5	5 20
8	S. aft. Trin.	4 31	7 29	16 3	17 23	2 8	9 59	5 13
9		4 33	7 27	15 46	14 45	3 15	10 53	5 5
10	St. Laurence	4 35	7 25	15 28	11 14	☽ sets	11 47	4 56
11	Fr. Brunf. St.	Dogd. e.	7 24	15 11	7 0	7 a 22	0 41	4 47
12	Fr. Wales b.	O. Lam	7 22	14 53	2 19	7 4	1 34	4 38
13		4 40	7 20	14 34	2 31	8 17	2 27	4 27
14		4 42	7 18	11 16	7 12	8 46	3 21	4 17
15	S. aft. Trin.	Assum.	7 17	13 57	11 27	9 17	4 15	4 5
16	D. of Yor. bs	4 45	7 15	13 38	14 58	9 53	5 10	3 53
17		4 47	7 13	13 19	17 31	10 35	6 6	3 41
18		4 49	7 11	12 59	19 3	11 26	7 3	3 28
19		4 50	7 10	12 40	19 25	morn	7 59	3 15
20		4 52	7 8	12 20	18 40	0 22	8 53	3 1
21	D. of Clarence	4 54	7 6	11 0	16 54	1 24	9 45	2 46
22	S. aft. Trin.	4 56	7 4	11 40	14 18	2 29	10 35	2 31
23		4 58	7 2	10 20	11 3	3 39	11 23	2 16
24	St. Bartholom.	5 0	7 0	10 59	7 21	☽ rises	morn	2 0
25		5 2	6 58	10 38	3 24	6 a 56	0 9	1 44
26		5 3	6 57	10 17	0 n 38	7 17	0 53	1 27
27		5 5	6 55	9 56	4 35	7 39	1 36	1 10
28	St. Augustin	5 7	6 53	9 35	8 19	8 4	2 19	0 53
29	S. aft. Trin.	Beh J. B	6 51	9 14	11 42	9 31	3 3	0 35
30		5 11	6 49	8 52	14 36	9 59	3 48	0 17
31		5 13	6 47	8 31	16 54	10 33	4 34	0 aft. 1
☉	Day Length	Helioc.	Helioc.	Helioc.	Helioc.	Helioc.	Helioc.	h
☉	decreas. of day	long. ♀	long. ♂	long. ♂	long. ☉	long. ♀	long. ♂	rises
1	1 14 15 20	0 40	9 19	10 19	9 18	4 31	14 13	9 a 32
7	1 32 15 2	0 53	9 46	13 7	15 3	4 8	21 41	9 9
13	1 54 14 40	1 5	10 14	16 8	20 49	3 45	24 41	8 46
19	2 14 14 20	1 17	10 41	19 10	26 36	3 24	22 42	8 23
25	2 38 13 56	1 29	11 9	22 14	2 23	3 14	15 5	8 2

1790.

August.

23

Day	Day lig. begins	Day lig. ends	Durat. twilig.	Pl. C's node	h's latitude	u's latitude	δ's latitude	♀'s latitude	♂'s latitude
1	1 23	10 36	2 56	5m 23	2 30	0n 50	0n 13	1 20	0n 51
7	1 46	10 13	2 43	5 4	2 31	0 59	0 8	1 1	1 33
13	2 7	9 52	2 32	4 45	2 33	0 59	0 3	0 41	1 46
19	2 27	9 32	2 23	4 26	2 34	0 59	0 2	0 22	1 35
25	2 46	9 13	2 15	4 6	2 35	0 50	0 6	0 3	1 7
M	C's longitude		D's long.	D's latitude	h's long.	u's long.	δ's long.	♀'s long.	♂'s long.
1	9 18	5	21 58	1 9	5 47	4m 42	6 57	2 14	27 25
2	10 15	32	3 46	0 7	5 45	4 54	7 34	3 24	29 23
3	11 13	1	15 37	0 56	5 48	5	8 11	4 34	1 23
4	12 10	31	27 38	1 57	5 41	5 19	8 48	5 44	3 24
5	13 8	3	9 52	2 54	5 40	5 32	9 25	6 55	5 26
6	14 5	36	22 25	3 43	5 38	5 44	10 2	8 5	7 29
7	15 3	10	5 20	4 23	5 36	5 57	10 39	9 15	9 33
8	16 0	45	18 39	4 5	5 34	6 9	11 16	0 26	11 37
9	16 58	22	2 21	5 1	5 32	6 22	11 54	11 36	13 40
10	17 56	0	16 25	4 55	5 29	6 34	12 31	12 47	15 43
11	18 53	39	0m 45	4 30	5 27	6 47	13 9	13 58	17 45
12	19 51	20	15 15	3 48	5 25	6 59	13 47	15 9	19 47
13	20 49	2	29 48	2 50	5 22	7 12	14 25	16 20	21 48
14	21 46	45	14 19	1 42	5 19	7 24	15 3	17 31	23 48
15	22 44	29	8 43	0 27	5 16	7 37	15 41	18 42	25 47
16	23 42	13	12m 56	0n 49	5 13	7 50	16 19	19 53	27 44
17	24 39	59	26 58	2 0	5 10	8 3	16 57	21 4	29 40
18	25 37	46	10 49	3 4	5 8	8 10	17 35	22 16	1m 35
19	26 35	33	24 27	3 56	5 5	8 29	18 14	23 27	3 28
20	27 33	22	7 54	4 34	5 2	8 41	18 52	24 39	5 20
21	28 31	12	21 9	4 57	4 59	8 54	19 31	25 50	7 11
22	29 29	3	4m 13	5 3	4 55	9 7	20 9	27 2	9 1
23	0 26	56	17 3	4 55	4 52	9 20	20 48	28 14	10 49
24	1 24	50	29 41	4 32	4 48	9 33	21 27	29 25	12 36
25	2 22	45	12 6	3 56	4 45	9 46	22 6	0 37	14 22
26	3 20	42	24 18	3 10	4 41	9 59	22 45	1 49	16 6
27	4 18	41	6 20	2 16	4 38	10 12	23 24	3 1	17 49
28	5 16	42	18 13	1 16	4 34	10 25	24 4	4 13	19 30
29	6 14	45	0 8	0 13	4 30	10 38	24 43	5 25	21 10
30	7 12	49	11 48	0 50	4 26	10 51	25 22	6 38	22 49
31	8 10	55	23 38	1 52	4 22	11 4	26 1	7 50	24 28
Days	u's sets	δ's sets	♀'s rises	♂'s rises	h's declin.	u's declin.	δ's declin.	♀'s declin.	♂'s declin.
1	8 a 40	9 a 30	1m 17	3m 12	0n 1	10n 43	2 s 34	22 n 7	21 n 32
7	8 18	9 12	1 23	3 55	0 s 5	10 15	4 6	22 8	19 22
13	7 58	8 55	1 34	4 5	0 12	9 47	5 39	21 47	15 55
19	7 38	8 39	1 47	5 33	0 20	9 19	7 11	21 4	11 43
25	7 18	8 23	2 2	7 27	0 29	8 49	8 43	19 59	7 11

The LUNATIONS.

Last quarter the 1st day, at 34 minutes past 7 evening.

New Moon the 8th day, at 34 minutes past 11 night.

First quarter the 15th day, at 54 minutes past 2 afternoon.

Full Moon the 23d day, at 1 minute past 7 morning.

N ^o	Sundays & other remark. days	☉ rises	☉ sets	☉'s declin.	☿'s declin.	☿ rises & sets	☿ South	Clock aft. ☉	
1	Giles	5 14	6 45	8 n 9	18 n 30	11 a 14	5 n 21	0 20"	
2	Lond. bur. 1666	5 17	6 43	7 47	19 15	morn	6 10	0 39	
3		5 19	6 41	7 25	19 6	0 3	7 1	0 58	
4		5 21	6 39	7 3	17 58	0 58	7 53	1 17	
C	14 S. aft. Trin.	5 23	6 37	6 40	15 49	2 3	8 46	1 37	
6		5 24	6 36	6 18	12 44	3 12	9 39	1 56	
7	Enurhus	5 26	6 34	5 55	8 50	4 28	10 33	2 16	
8	Nativ. of V. M.	5 28	6 32	5 33	4 s 18	☿ sets	11 27	2 37	
9		5 30	6 30	5 10	0 34	6 a 23	0 a 22	2 57	
10		5 32	6 28	4 47	5 26	6 55	1 18	3 17	
11		5 34	6 26	4 24	9 52	7 26	2 14	3 38	
C	15 S. aft. Trin.	5 36	6 24	4 2	13 43	8 2	3 12	3 59	
13		5 38	6 22	3 38	16 45	8 43	4 9	4 19	
14	Holy Cross	5 4	6 20	3 15	18 35	9 32	5 6	4 40	
15	Ember week	5 42	6 18	2 52	19 14	10 26	6 3	5 1	
16		5 44	6 16	2 29	18 45	11 28	6 58	5 22	
17	Lambert	5 46	6 14	2 6	17 15	morn	7 51	5 43	
18		5 48	6 12	1 4	14 53	0 34	8 41	6 4	
C	16 S. aft. Trin.	5 50	6 10	1 19	11 51	1 40	9 29	6 25	
20		5 52	6 8	0 56	8 19	2 43	10 15	6 46	
21	St. Matthew	5 5	6 6	0 32	4 29	3 54	10 59	7 7	
22	K. Geo. 3. c. 10.	5 56	6 4	0 9	0 31	4 59	11 43	7 28	
23		5 58	6 2	0 s 14	3 n 26	☿ rises	morn	7 49	
24		6 0	6 0	0 38	7 12	6 a 18	0 26	8 9	
25		6 2	5 58	1 10	10 40	6 42	1 9	8 30	
C	17 S. aft. Trin.	Cypria.	5 57	1 25	13 41	7 10	1 53	8 50	
27		6 5	5 55	1 48	16 10	7 44	2 38	9 10	
28		6 7	5 53	2 11	17 57	8 22	3 25	9 30	
29	St. Mic. Prs. Ch. A. M. 5	6 9	5 51	2 35	18 57	9 5	4 13	9 49	
30	St. Jerom	6 11	5 49	2 58	19 6	9 58	5 2	10 9	
Days	Day of reaf.	Length of day	Helioc. long. ♀	Helioc. long. ♀	Helioc. long. ♂	Helioc. long. ♂	Helioc. long. ♀	Helioc. long. ♀	☿ rises
1	3 4	13 30	17 43	11 24	45 11	51 9	44 21	7 11	35
7	3 26	13 8	1 55	12 9	28 59	14 5	4 10	24 59	13
13	3 50	12 44	2 7	12 30	2 1	9 0	13 46	11 1	51
19	4 14	12 20	2 20	13 4	5 21	26 4	23 30	28 9	29
25	4 38	11 56	2 31	13 31	8 35	27 34	30 14	15 1	6

1790.

September.

25

Day	Day lig. begins	Day lig. ends	Durat. twilig.	Pl. D's node	h's latitude	2's latitude	♂'s latitude	♀'s latitude	♂'s latitude
1	3 6	8 53	2 8	3m 4	2 s 36	0 n 59	0 s 11	0 n 18	0 n 21
7	3 22	8 37	2 4	3 25	2 37	1 c 0	0 16	0 34	0 s 25
13	3 37	8 27	2 0	3 6	2 38	1 c 0	0 20	0 49	1 13
19	3 51	8 8	1 58	2 47	2 39	1 c 0	0 24	1 2	2 c
25	4 4	7 54	1 56	2 28	2 30	1 1	0 28	1 13	2 42
M D	☉'s longitude	☽'s long.	☽'s latitude	h's long.	2's long.	♂'s long.	♀'s long.	♂'s long.	♀'s long.
1	9 9 3	5 11 37	2 s 4	4 18	11 17	26 41	9 2	26 11	5
2	10 7 14	17 50	3 40	4 14	1 30	27 20	10 14	27 41	
3	11 5 27	0 22	4 22	4 10	11 43	28 c	11 27	29 15	
4	12 3 42	13 17	4 51	4 6	11 56	28 40	12 39	0 48	
C	13 1 59	26 37	5 7	4 12	0 29	20 13	5 2	2 20	
6	14 0 18	10 27	5 5	3 57	12 22	0 11	0 15	4 3	51
7	14 58 38	24 42	4 45	3 53	12 35	0 40	16 17	5 21	
8	15 57 0	9 18	4 6	3 49	12 48	1 20	17 30	6 50	
9	16 55 24	24 8	3 1	3 45	13 1	2 0	18 43	8 17	
10	17 53 50	9 4	2 c	3 40	13 14	2 40	19 56	9 43	
11	18 52 18	23 58	0 42	3 36	13 27	3 21	21 9	11 8	
C	19 50 48	8 42	0 n 38	3 32	13 40	4 1	22 22	12 31	
13	20 49 20	23 11	1 54	3 27	13 53	4 41	23 35	13 53	
14	21 47 53	7 22	3 2	3 23	14 6	5 22	24 48	15 13	
15	22 46 28	21 14	3 57	3 18	14 19	6 22	26 2	16 33	
16	23 45 4	4 48	4 38	3 14	14 32	6 43	27 15	17 52	
17	24 43 42	18 3	5 3	3 9	14 45	7 24	28 28	19 9	
18	25 42 21	1 3	5 12	3 4	14 58	8 5	29 41	20 24	
C	26 41 2	13 48	5 5	2 57	15 11	8 46	0 55	21 38	
20	27 39 45	26 20	4 43	2 55	15 24	9 27	2 8	22 56	
21	28 38 30	8 41	4 9	2 50	15 37	10 8	3 22	24 0	
22	29 37 16	20 51	3 23	2 45	15 50	10 49	4 36	25 9	
23	0 36 4	2 53	2 29	2 41	16 3	11 30	5 49	26 16	
24	1 34 54	14 48	1 29	2 36	16 16	12 12	7 3	27 20	
25	2 33 46	16 37	0 25	2 31	16 28	12 54	8 17	28 22	
C	3 32 41	8 23	0 s 39	2 26	16 41	13 34	9 30	29 22	
27	4 31 38	20 1	1 43	2 21	16 5	14 16	10 44	0 19	
28	5 30 37	2 1	2 42	2 17	17 6	14 58	11 58	1 12	
29	6 29 38	14 1	3 35	2 12	17 18	15 39	13 12	2 2	
30	7 28 42	26 12	4 19	2 7	17 31	16 21	14 26	2 50	
☽'s	☽'s	☽'s	☽'s	☽'s	☽'s	☽'s	☽'s	☽'s	☽'s
☽'s	☽'s	☽'s	☽'s	☽'s	☽'s	☽'s	☽'s	☽'s	☽'s
1	0 a 56	8 a 6	2 m 22	7 16	0 s 41	8 n 15	10 s 20	18 n 18	1 n 52
7	rises	7 51	2 40	7 5	0 51	7 46	11 58	16 31	2 s 31
13	4 52	7 37	3 c	6 53	1 2	7 16	13 25	14 27	6 36
19	4 38	7 2	3 20	6 40	1 15	6 46	14 49	12 8	10 18
25	4 25	7 10	3 40	6 27	1 25	6 17	16 10	9 36	13 26

THE LUNATIONS.

Last quarter the 18 day, at 32 minutes past 11 morning.

New Moon the 8th day, at 36 minutes past 8 morning.

First quarter the 25th day, at 7 minutes past 1 morning.

Full Moon the 23d day, at 7 minutes before 1 morning.

Last quarter the 31st day, at 28 minutes past 1 morning.

M	Sundays & other	☉	☉	☉'s	☉'s	☉ rises	☉	Clock
D	remark days	rises	sets	declin.	declin.	& sets	South	aft. ☉
1	Kernigius	6 13	5 47	3 22	18 20	10 55	5 m 52	10' 28"
2		6 15	5 45	3 45	16 37	morn	6 43	10 46
3	18 S. aft. Trin.	6 17	5 43	4 8	13 59	0 1	7 35	11 5
4		6 19	5 41	4 31	10 30	1 12	8 28	11 23
5		6 21	5 39	4 55	6 19	2 27	9 21	11 40
6	Faith	6 23	5 37	5 18	1 37	3 45	10 14	11 57
7		6 25	5 35	5 41	3 14	5 7	11 9	12 14
8		6 27	5 33	6 4	8 15	☉ sets	0 a 6	12 31
9	St. Denys	6 29	5 31	6 27	12 15	6 a 6	1 4	12 46
10	19 S. aft. Trin.	O. Mic.	5 29	6 49	15 40	6 45	2 3	13 2
11	Ox & Cam. I. b.	6 3	5 27	7 12	17 58	7 33	3 3	13 17
12		6 3	5 25	7 35	19 3	8 26	4 2	13 31
13	Tr. K. Edward	6 3	5 23	7 57	18 53	9 28	5 0	13 45
14		6 39	5 21	8 20	17 37	10 33	5 55	13 59
15		6 41	5 19	8 42	15 26	11 40	6 47	14 12
16		6 43	5 17	9 4	12 32	morn	7 56	14 24
17	20 S. aft. Trin.	Etheld.	5 16	9 26	9 7	0 49	8 22	14 30
18	St. Luke	6 46	5 14	9 48	5 23	1 55	9 6	14 47
19		6 48	5 12	10 10	1 28	3 0	9 49	14 58
20		6 50	5 10	10 31	2 27	4 4	10 32	15 8
21		6 52	5 8	10 53	6 15	8 11	11 15	15 18
22		6 54	5 6	11 14	9 47	6 12	11 59	15 26
23		6 56	5 4	11 35	12 56	☉ rises	morn	15 34
24	21 S. aft. Trin.	6 58	5 2	11 56	5 33	5 a 52	0 44	15 42
25	K. Geo. III. acc.	☉ in	5 0	12 17	17 31	6 27	1 29	15 49
26	K. Geo. III. pr.	7 2	4 58	12 37	18 44	7 9	2 16	15 54
27		7 3	4 57	12 58	19 7	7 56	3 4	16 0
28	St. Sim. & Jude	7 5	4 55	13 18	18 36	8 52	3 53	16 4
29		7 7	4 53	13 38	17 17	9 53	4 43	16 8
30		7 9	4 51	13 57	14 53	10 59	5 33	16 11
31	22 S. aft. Trin.	7 11	4 49	14 17	11 47	morn	6 23	16 13
	Day	Length	Helio.	Helio.	Helio.	Helio.	Helio.	h
	decreat.	of day	long. ♀	long. ♀	long. ♂	long. ☉	long. ♀	sets
1	3 0	11 3	29 44	13 59	11 51	8 28	12 59	4 10
2	5 21	11 10	2 56	14 26	15 9	14 23	22 45	25 28
3	5 43	10 46	3 8	14 54	18 29	20 20	21 30	20 33
4	6 10	10 24	3 20	15 21	21 51	26 18	12 15	20 37
5	6 34	10 0	3 53	15 49	25 16	28 17	21 59	25 47

1790.

October.

27

Day	Day lig. begins	Day lig. ends	Durat. twilig.	Pl. D's node	h's latitude	l's latitude	♂'s latitude	♀'s latitude	♂'s latitude
1	4 18	7 42	1 56	am 9	2 30	1 n 1	0 31	1 n 21	3 s 14
7	4 31	7 29	1 55	1 50	2 38	1 2	0 35	1 27	3 26
13	4 43	7 17	1 54	1 31	2 38	1 3	0 38	1 31	2 57
19	4 55	7 5	1 54	1 1	2 38	1 3	0 41	1 32	1 29
25	5 4	6 56	1 55	0 53	2 37	1 4	0 44	1 30	0 31

M D	☉'s longitude	☽'s long.	☽'s latitude	h's long.	l's long.	♂'s long.	♀'s long.	♂'s long.
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1	8 27 48	8 41	4 s 52	2 30	17 43	17 11	3 15	14 40	3 13
2	9 26 57	21 32	5 11	1 58	17 56	17 45	16 54	4 14	
C	10 26 8	4 4	5 15	1 54	18 8	18 27	18 8	4 49	
4	11 25 22	18 31	5 2	1 49	18 21	19 9	19 22	5 20	
5	12 24 38	2 42	4 30	1 45	18 33	19 52	20 36	5 45	

6	13 23 50	17 19	3 39	1 40	18 40	20 34	21 51	6 4	
7	14 23 16	2 15	2 33	1 36	18 58	21 16	23 5	6 18	
8	15 22 38	17 23	1 15	1 31	19 11	21 58	24 10	6 25	
9	16 22 3	2 34	0 n 8	1 27	19 23	22 40	25 34	6 24	
C	17 21 29	17 37	1 30	1 22	19 36	23 23	26 49	6 16	

11	18 20 57	2 26	2 45	1 18	19 48	24 5	28 3	6 0	
12	19 20 27	16 54	3 48	1 13	20 0	24 48	29 18	5 36	
13	20 19 59	0 57	4 35	1 9	20 12	25 31	0 33	5 3	
14	21 19 33	14 36	5 5	1 5	20 24	26 14	1 48	4 22	
15	22 19 8	27 51	5 17	1 1	20 36	26 57	3 2	3 32	

16	23 18 45	10 45	5 13	0 57	20 48	27 40	4 17	2 34	
C	24 18 24	23 20	4 54	0 53	20 59	28 23	5 32	1 30	
18	25 18 5	5 40	4 22	0 49	21 11	29 6	6 46	0 21	
19	26 17 47	17 48	3 38	0 45	21 22	29 49	8 1	29 6	
20	27 17 31	20 47	2 46	0 41	21 34	0 33	9 16	27 47	

21	28 17 17	11 40	1 46	0 37	21 46	1 16	10 31	26 33	
22	29 17 5	23 29	0 42	0 33	21 57	1 59	11 46	25 20	
23	m 0 16 55	5 17	0 523	0 29	22 9	2 43	13 0	24 17	
C	1 16 46	17 5	1 28	0 25	22 20	3 26	14 15	23 16	
25	2 16 39	28 56	2 29	0 22	22 32	4 9	15 30	22 22	

26	3 16 34	10 53	3 24	0 18	22 43	4 53	16 45	11 38	
27	4 16 32	22 57	4 10	0 15	22 55	5 36	18 0	21 6	
28	5 16 33	5 12	4 46	0 12	23 0	6 20	19 15	20 50	
29	6 16 36	17 42	5 9	0 8	23 17	7 4	20 30	20 44	
30	7 16 40	0 30	5 18	0 5	23 28	7 48	21 45	20 47	
C	8 16 46	13 39	5 10	0 2	23 39	8 32	23 1	20 59	

Day	l's rises	♂'s sets	♀'s rises	♂'s sets	h's declin.	l's declin.	♂'s declin.	♀'s declin.	♂'s declin.
1	4 m 10	6 a 58	4 m 0	6 a 11	1 s 37	5 n 48	17 s 27	6 n 54	15 s 46
7	3 56	6 46	4 20	5 52	1 47	5 19	18 39	4 5	16 52
13	3 40	6 34	4 41	5 3	1 57	4 51	19 46	1 10	16 0
19	3 24	6 22	5 0	5 8	2 7	4 24	20 48	1 s 4	12 33
25	3 7	6 12	5 19	rises	2 15	3 57	21 44	4 44	8 14

THE LUNATIONS.

New Moon the 6th day, at 21 minutes past 6 evening.

First quarter the 13th day, at 2 minutes past 3 afternoon.

Full Moon the 21st day, at 43 minutes past 7 evening.

Last quarter the 29th day, at 11 minutes past 1 afternoon.

M	Sundays & other remark days	☉ rises	☉ sets	☉'s declin.	☾'s declin.	☾ rises & sets	☾ South	Clock aft. ☉
1	All Saints	7 13	4 47	14 s 36	7 n 59	om 10	7 m 13	16' 14"
2	Fr. Edw. & Al.	7 14	4 46	14 55	3 38	1 23	8 4	16 14
3	Fra. Sophia b.	7 16	4 44	15 14	1 s 4	2 42	8 57	16 14
4		7 18	4 42	15 33	5 49	4 1	9 51	16 12
5	Power Plot	7 20	4 40	15 51	10 19	5 23	10 47	16 10
6	Mich. T. beg.	Leonar	4 39	16 9	14 11	☾ sets	11 45	16 7
7	23 S. aft. Trin.	D. Can	borne	16 27	17 4	5 a 22	pa 46	16 4
8	Fr. Aug. b.	7 25	4 35	16 44	18 44	6 15	1 48	15 59
9	Ld. Mayor's day	7 26	4 34	17 1	19 6	7 14	2 48	15 53
10		7 28	4 32	17 18	18 12	8 19	3 45	15 47
11	St. Martin.	7 30	4 30	17 35	16 15	9 28	4 40	15 40
12		7 32	4 28	17 51	13 29	10 37	5 31	15 32
13	Britius	7 33	4 27	18 7	10 8	11 43	6 18	15 23
14	24 S. aft. Trin.	7 35	4 25	18 23	6 24	morn	7 3	15 13
15	Mechutus	7 36	4 24	18 38	2 30	0 49	7 7	15 3
16		7 38	4 22	18 53	1 n 26	1 55	8 30	14 52
17	Hugh E. of Lin.	7 39	4 21	19 8	5 16	2 59	9 12	14 40
18		7 41	4 19	19 22	8 54	4 1	9 55	14 27
19		7 42	4 18	19 36	12 10	5 3	10 39	14 13
20	Edmund K & M.	7 44	4 16	19 50	14 57	6 6	11 24	13 59
21	25 S. aft. Trin.	7 45	4 15	20 3	17 7	☾ rises	morn	13 43
22	Cecilia. Old	Max. d	4 14	20 16	18 33	5 a 5	0 11	13 27
23	St. Clement.	7 48	4 12	20 28	19 5	5 51	0 59	13 10
24		7 4	4 11	20 41	18 52	6 43	1 48	12 53
25	D. Glos. born	7 4	4 10	20 52	17 4	7 43	2 37	12 34
26		7 52	4 8	21 4	15 36	8 47	3 27	12 15
27		7 53	4 7	21 15	12 44	9 55	4 10	11 55
28	Adv. Sunday.	7 54	4 6	21 25	9 11	11 4	5 5	11 34
29	Mic. Term end.	7 55	4 5	21 35	5 5	morn	5 54	11 13
30	St. Andrew.	7 56	4 4	21 45	0 38	0 17	6 43	10 51
☉	Day decreas.	Length of day	Helio. long. ♀	Helio. long. ♀	Helio. long. ♂	Helio. long. ♂	Helio. long. ♂	h sets
1	7 50	9 34	3 47	10 11	29 4 17	9 8 17	3 22 0	9 41 3m 21
7	7 40	9 12	3 59	16 48	2 45	25 19	13 2	14 23 2 56
13	7 40	8 54	4 11	17 16	6 16	21 21	22 42	13 38 2 31
19	7 58	8 36	4 24	17 43	9 49	27 25	2 17 21	7 47 2 5
25	8 15	8 20	4 36	18 11	13 23	3 11 29	11 58	28 18 1 39

1790.

November.

29

Days	Daylig. begins	Day lig. ends	Durat. twilig.	Pl. D's node	h's latitude	u's latitude	δ's latitude	♀'s latitude	♂'s latitude
1	5 17	6 43	1 56	om 30	2 s 38	1 n 5	0 s 48	1 m 25	2 n 0
7	5 26	6 34	1 58	0 11	2 34	1 6	0 50	1 19	2 15
13	5 33	6 28	2 0	29 53	2 34	1 7	0 53	1 10	1 56
19	5 41	6 19	2 2	29 33	2 32	1 9	0 55	0 59	1 21
25	5 47	6 13	2 4	29 14	2 3	1 10	0 57	0 47	0 40
M	☉'s	☽'s	☽'s	h's	u's	δ's	♀'s	♂'s	
D	longitude.	long.	latitude	long.	long.	long.	long.	long.	
1	m 9 16	55	27 12	4 s 40	29 59	23 12	9 10	24 10	1 23
2	10 17	6	11 10	4 3	29 56	24 1	10 0	25 31	21 56
3	11 17	20	25 34	3 5	29 53	24 11	10 44	26 40	22 38
4	12 17	36	10 19	1 53	29 50	24 22	11 2	28 1	23 29
5	13 17	53	25 22	0 3	29 47	24 32	12 13	29 16	24 26
6	14 18	12	10 13	0 n 52	29 44	24 43	12 57	om 13	25 28
7	15 18	33	25 44	2 12	29 42	24 53	13 42	1 46	26 35
8	16 18	56	10 45	3 22	29 39	25 3	14 26	3 1	27 47
9	17 19	20	25 27	4 18	29 37	25 13	15 11	4 17	29 3
10	18 19	46	9 44	4 55	29 35	25 27	15 55	5 3	om 23
11	19 20	14	23 34	5 14	29 33	25 33	16 40	6 48	1 45
12	20 20	43	6 57	5 15	29 31	25 43	17 25	8 3	3 9
13	21 21	13	19 53	4 59	29 29	25 53	18 10	9 19	4 35
14	22 21	44	2 27	4 30	29 27	26 3	18 55	10 34	6 3
15	23 22	16	14 43	3 40	29 25	26 12	19 40	11 50	7 32
16	24 22	50	26 45	2 58	29 24	26 22	20 25	13 5	9 12
17	25 23	25	8 38	2 1	29 22	26 31	21 10	14 20	10 33
18	26 24	1	20 26	0 58	29 20	26 41	21 55	15 36	12 5
19	27 24	38	2 13	0 s 6	29 19	26 50	22 40	16 51	13 37
20	28 25	17	14 2	1 11	29 17	26 50	23 23	18 7	15 10
21	29 25	57	25 55	2 12	29 16	27 0	24 10	19 12	16 43
22	30 26	38	7 54	3 9	29 15	27 17	24 56	20 28	18 16
23	1 27	21	20 2	3 57	29 14	27 26	25 41	21 43	19 49
24	2 28	6	2 18	4 35	29 13	27 35	26 26	23 9	21 23
25	3 28	52	14 46	5 0	29 11	27 43	27 12	24 24	22 57
26	4 29	39	27 25	5 11	29 11	27 51	27 57	25 40	24 31
27	5 30	28	10 19	5 7	29 11	27 59	28 43	26 55	26 5
28	6 31	18	23 28	4 47	29 11	28 7	29 29	28 11	27 39
29	7 32	10	6 55	4 11	29 10	28 15	29 14	29 26	29 13
30	8 33	4	20 41	3 20	29 10	28 23	29 0	30 42	30 47
Days	u's rises	δ's sets	♀'s rises	♂'s rises	h's declin.	u's declin.	δ's declin.	♀'s declin.	♂'s declin.
1	2 m 48	6 a 0	5 m 43	5 m 22	2 s 24	3 n 27	2 s 39	8 s 6	6 a 29
7	2 30	5 50	6 2	5 29	2 29	3 3	2 s 18	10 52	8 10
13	2 11	5 42	6 20	5 51	2 33	2 40	2 s 49	13 30	11 14
19	1 52	5 33	6 39	6 20	2 36	2 48	2 s 11	15 56	14 39
25	1 31	5 27	6 53	6 51	2 37	1 57	2 s 24	17 18	17 53

The LUNATIONS.

New Moon the 6th day, at 55 minutes past 4 morning.

First quarter the 13th day, at 50 minutes past 8 morning.

Full Moon the 21st day, at 44 minutes past 1 afternoon.

Last quarter the 28th day, at 54 minutes past 10 night.

M	Sundays & other	☉	☉	☉'s	☉'s	☉ rises	☉	Clock
D	remark. days	rises	sets	declin.	declin.	& sets	South	aft. ☉
1		7 57	4 3	21 54	3 58	1m 34	7m 33	10' 28"
2		7 58	4 2	22 5	8 28	2 5	8 26	10 5
3		7 59	4 1	22 12	12 33	4 10	9 22	9 40
4	2 S. in Advent	8 0	4 0	22 20	15 52	5 30	10 20	9 16
5		8 1	3 59	22 28	18 8	6 48	11 19	8 51
6	Nicholas	8 2	3 58	22 35	19 8	D sets	0 a 20	8 25
7		8 3	3 57	22 42	18 49	5 a 48	1 20	7 59
8	Conception	8 3	3 57	22 48	17 17	6 58	2 17	7 32
9		8 4	3 56	22 54	14 46	8 8	3 11	7 5
10		8 4	3 56	22 59	11 32	9 17	4 1	6 37
11	3 S. in Advent	8 5	3 55	23 4	7 49	10 26	4 49	6 9
12		8 6	3 54	23 8	3 52	11 34	5 34	5 41
13	Lucy	8 6	3 54	23 12	0 n 8	morn	6 17	5 12
14	Ember week	8 6	3 54	23 16	4 4	0 37	6 59	4 43
15		8 7	3 53	23 19	7 47	1 40	7 41	4 14
16	Camb. T. ends	0 Sap.	3 53	23 22	11 10	2 42	8 25	3 45
17	Oxf. Term ends	8 7	3 53	23 24	14 8	3 45	9 10	3 15
18		8 8	3 52	23 26	16 31	4 45	9 56	2 46
19	4 S. in Advent	8 8	3 52	23 27	18 12	5 45	10 43	2 16
20		8 8	3 52	23 28	19 5	6 38	11 32	1 46
21	St. Thomas	Shor. d.	3 52	23 28	19 5	D rises	morn	1 16
22		8 8	3 52	23 28	18 9	5 a 24	0 22	0 46
23		8 8	3 52	23 27	16 18	6 25	1 12	0 16
24		8 8	3 52	23 26	13 36	7 31	2 1	obe 14
25	Christmas day	8 7	3 53	23 24	10 11	8 42	2 50	0 44
26	S. aft. Christm.	St. Stephen	3 53	23 21	6 14	9 54	3 39	1 13
27	St. John	8 7	3 53	23 20	1 53	11 7	4 28	1 43
28	Holy Innocents	8 6	3 54	23 17	2 37	morn	5 17	2 12
29		8 6	3 54	23 13	7 3	0 21	6 7	2 42
30		8 6	3 54	23 9	11 10	1 37	6 59	3 11
31	Silvester	8 5	3 55	23 5	14 40	2 53	7 53	3 40
Day	Day	Length	Helioc.	Helioc.	Helioc.	Helioc.	Helioc.	h
	decreaf.	of day	long. h	long. U	long. ♂	long. ☉	long. ♀	sets
1	8 28	8	4 14	18 48	17 5	0 9	11 34	21 33
7	8 39	7 54	5 0	19 5	20 38	15 40	1 7	3 25
13	8 46	7 48	5 12	19 3	24 1	21 46	10 40	19 55
19	8 50	7 44	5 24	20	27 59	27 53	10 11	6 45
25	9 0	7 46	5 37	20 28	31 41	32 0	9 41	24 39

1790.

December.

31

Days	Day lig. begins	Day lig. ends	Durat. twilig.	Pl. D's node	h's latitude	4's latitude	δ's latitude	♀'s latitude	♂'s latitude
1	5 54	6 6	2 5	28 55	2 30	1 11	0 59	0 34	0 1
7	5 57	6 3	2 6	23 36	2 28	1 13	1 1	0 21	0 41
13	5 59	6 1	2 7	28 17	2 27	1 14	1 2	0 6	1 16
19	6 1	5 59	2 7	27 58	2 25	1 16	1 3	0 8	1 44
25	6 1	5 59	2 7	27 39	2 24	1 17	1 4	0 22	2 3
M D	☉'s longitude	☽'s long.	☽'s latitude	h's long.	4's long.	δ's long.	♀'s long.	♂'s long.	
1	♂ 9 33 59	4 4	2 16	29 10	28 31	1 46	1 57	2 21	
2	10 34 55	19 13	1 1	29 10	28 39	2 31	3 13	3 55	
3	11 35 53	3 11 55	0 1	29 10	28 46	3 17	4 28	5 29	
4	12 36 52	18 4	1 38	29 11	28 53	4 3	5 44	7 3	
C	13 37 52	3 2 40	2 51	29 11	29 0	4 49	6 59	8 37	
6	14 38 53	18 44	3 51	29 11	29 7	5 35	8 15	10 11	
7	15 39 55	3 28	4 36	29 12	29 14	6 21	9 30	11 45	
8	16 40 58	17 51	5 1	29 13	29 21	7 7	10 46	13 19	
9	17 42 2	1 44	5 8	29 14	29 27	7 53	12 1	14 53	
10	18 43 6	16 18	4 57	29 15	29 34	8 40	13 17	16 27	
11	19 44 10	28 20	4 31	29 16	29 40	9 26	14 33	18 1	
C	20 45 15	10 53	3 53	29 17	29 47	10 12	15 48	19 36	
13	21 46 21	23 15	3 4	29 18	29 53	10 59	17 4	21 11	
14	22 47 27	5 17	2 8	29 19	29 59	11 45	18 19	22 45	
15	23 48 33	17 9	1 8	29 20	30 4	12 32	19 35	24 20	
16	24 49 39	28 56	0 5	29 22	0 10	13 18	20 50	25 55	
17	25 50 45	10 43	0 59	29 23	0 15	14 5	22 6	27 30	
18	26 51 52	22 35	1 59	29 24	0 20	14 51	23 21	29 6	
C	27 52 59	4 34	2 55	29 26	0 25	15 38	24 37	30 41	
20	28 54 6	16 44	3 44	29 28	0 30	16 24	25 52	32 17	
21	29 55 14	29 5	4 23	29 30	0 34	17 11	27 8	33 53	
22	30 56 22	11 36	4 50	29 33	0 39	17 57	28 23	35 29	
23	1 57 31	24 26	5 2	29 35	0 43	18 44	29 39	37 5	
24	2 58 40	7 25	5 0	29 37	0 48	19 31	30 54	39 42	
25	3 59 49	20 35	4 42	29 40	0 52	20 18	32 10	41 19	
26	5 0 5	3 50	4	29 44	0 57	21 4	3 25	43 56	
27	6 2 9	17 29	3 2	29 45	0 59	21 51	4 41	45 33	
28	7 3 20	1 13	2 19	29 48	1 3	22 38	5 56	47 11	
29	8 4 31	15 9	1 1	29 51	1 6	23 25	7 12	48 48	
30	9 5 43	29 18	0 5	29 54	1 10	24 12	8 27	50 26	
31	10 6 55	13 37	1 20	29 57	1 13	24 50	9 43	51 4	
Days	☉'s declin.	☽'s declin.	☽'s declin.	h's declin.	4's declin.	δ's declin.	♀'s declin.	♂'s declin.	
1	1 11 9	5 22	7 14	7 2	28 37	1 14	24 26	20 5	120 41
7	0 47	5 17	7 30	7 49	2 36	1 25	24 28	21 3	22 54
13	0 24	5 11	7 4	8 15	3 3	1 11	24 33	22 44	24 26
19	0 1	5 9	7 5	sets	2 27	0 59	23 36	23 20	25 12
25	11 37	5 7	8 4	4 7	2 20	0 50	22 59	23 48	25 6

IN the course of this year there will happen six eclipses, four of the Sun, and two of the Moon, these two only being visible, and total. The times and circumstances as follow:

I. April 14th, ☉ eclipsed, invisible.

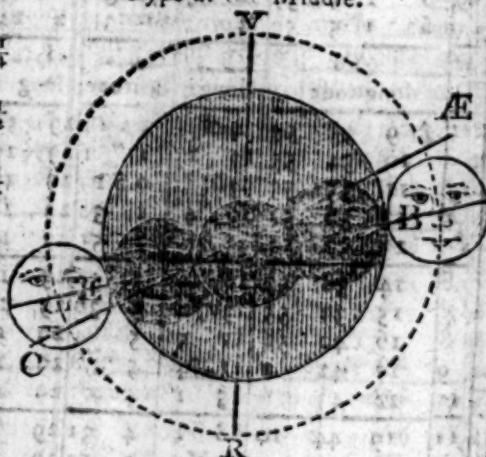
The ☿ at 4h. 29m. in longitude $0^{\circ} 24' 43''$; the ☾'s lat. $1^{\circ} 24'$ north

II. April 28th, ☾ eclipse, total, and visible, as follows:

Times, &c. Evening.

Type at the Middle.

	h. m.
Beginning of eclipse	10 10 $\frac{1}{4}$
Begin. total darkness	11 8
Middle, - - -	11 16 $\frac{1}{2}$
End total darkness,	12 45
End of eclipse,	13 42 $\frac{3}{4}$
Duration, - - -	3 32 $\frac{1}{2}$
Digits eclipsed $20^{\circ} 1'$ from south side of the earth's shadow.	



N. B. In the annexed type for the middle of the eclipse VR is a vertical circle, B is the moon at the beginning, and E at the end, AEC a portion of the ecliptic.

III. May 14th ☉ eclipsed, invisible

The ☿ at 4h. 36m. morning, in long. $1^{\circ} 23' 20''$; the ☾'s lat. $1^{\circ} 13' \frac{1}{2}$ S

IV. October 8th, ☉ eclipsed, invisible.

The ☿ at 8h. 36m. morn. long. $6^{\circ} 15' 14''$; the ☾'s lat. $1^{\circ} 27'$ south.

V. Oct. 22^d, ☾ eclipsed, total and visible, as follows:

Times, &c. Evening.

Type at the Middle.

	h. m.
Beginning of eclipse,	10 56
Begin. total darkness,	12 3
Middle, - - -	12 54 $\frac{1}{2}$
End of total darkness,	13 45 $\frac{1}{2}$
End of eclipse, - -	14 52 $\frac{1}{2}$
Duration, - - -	3 56 $\frac{1}{2}$
Digits eclipsed $18^{\circ} 55'$ from N. side of the earth's shadow.	



VI. Nov. 6. the ☉ is eclipsed invisible.—The ☿ at 6h. 21 $\frac{1}{2}$ in long. $7^{\circ} 14' 34''$; the moon's lat. $1^{\circ} 14'$ north.

Obliquity of the Ecliptic.

Equation of the Equinoctial Points.

Jan. 1.	23° 27' 52".6	- - -	+ 13".0
April 1.	23 27 51.9	- - -	+ 12.0
July 1.	23 27 51.2	- - -	+ 10.8
Oct. 1.	23 27 50.7	- - -	+ 9.6
Dec. 31.	23 27 50.2	- - -	+ 8.3

Time of High-Water at LONDON in the morning and afternoon of every day in the year.

Mo. Day	JANUARY				FEBRUARY				MARCH				APRIL				Mo. Day
	morn.		aftern.		morn.		aftern.		morn.		aftern.		morn.		aftern.		
	h	m	h	m	h	m	h	m	h	m	h	m	h	m	h	m	
1	2	7	2	31	3	10	3	20	2	4	2	30	3	20	3	30	1
2	2	57	3	34	3	45	4	2	2	53	3	13	3	56	4	17	2
3	3	32	3	50	4	20	4	40	3	30	3	4	4	39	5	1	3
4	4	6	4	24	5	2	5	24	4	6	4	28	5	24	5	50	4
5	4	44	5	3	5	40	6	13	4	47	5	16	6	17	6	45	5
6	5	24	5	43	6	42	7	12	5	33	6	0	7	14	7	44	6
7	6	12	6	37	7	43	8	17	6	28	6	5	8	15	8	46	7
8	7	6	7	36	8	53	9	29	7	27	8	0	9	18	9	48	8
9	8	8	8	42	10	5	10	39	8	35	9	9	10	18	10	46	9
10	9	19	9	54	11	12	11	43	9	43	10	16	11	13	11	40	10
11	10	31	11	4		0	14		10	47	11	18		0	8		11
12	11	42			0	41	1	6	11	48			0	32	0	54	12
13	0	14	0	44	1	30	1	53	0	14	0	39	1	16	1	38	13
14	1	12	1	38	2	15	2	36	1	2	1	24	2	0	2	22	14
15	2	9	2	19	2	53	3	8	1	46	2	2	2	41	2	50	15
16	2	42	3	5	3	22	3	34	2	27	2	45	3	15	3	29	16
17	3	20	3	34	3	47	4	1	3	0	3	15	3	44	3	59	17
18	3	48	4	8	4	16	4	32	3	30	3	44	4	17	4	35	18
19	4	16	4	32	4	49	5	6	3	58	4	11	4	54	5	14	19
20	4	48	5	4	5	24	5	44	4	28	4	42	5	36	6	0	20
21	5	21	5	38	6	7	6	32	5	5	5	25	6	20	6	54	21
22	6	0	6	21	6	58	7	26	6	48	6	13	7	23	7	53	22
23	6	44	7	7	7	53	8	32	6	40	7	9	8	26	8	1	23
24	7	34	8	3	9	7	9	45	7	39	8	12	9	36	10	11	24
25	8	35	9	8	10	21	10	56	8	46	9	22	10	46	11	10	25
26	9	42	10	17	11	31			9	58	10	34	11	53			26
27	10	52	11	28	0	6	0	37	11	9	11	44	0	25	0	56	27
28			0	1	1	7	1	36			0	15	1	26	1	56	28
29	0	34	1	4					0	46	1	10	2	25	2	50	29
30	1	33	2	2					1	44	2	12	3	10	3	30	30
31	2	30	2	51					2	40	3	2					31

This Table may serve the following Places; by adding

	h	m
For Tinmouth Haven, Hartle-pool, and Amsterdam	0	30
Brest	1	0
Scilly	1	45
Mount's Bay	1	55
Bridlington Pier and Humber	2	0

Time of High-Water at LONDON in the morning and afternoon of every day in the year.

Mo. Days	MAY				JUNE				JULY				AUGUST				Mo. Days
	morn.		aftern.		morn.		aftern.		morn.		aftern.		morn.		aftern.		
	h	m	h	m	h	m	h	m	h	m	h	m	h	m	h	m	
1	3	49	4	9	4	51	5	11	4	56	5	13	5	32	5	57	1
2	4	28	4	50	5	29	5	50	5	30	5	50	6	13	6	38	2
3	5	12	5	35	6	13	6	37	6	11	6	33	7	1	7	28	3
4	5	59	6	24	7	0	7	24	6	57	7	21	7	56	8	26	4
5	6	51	7	17	7	49	8	13	7	45	8	12	8	58	9	31	5
6	7	44	8	11	8	36	9	6	8	41	9	9	10	7	10	40	6
7	8	40	9	8	9	41	10	9	9	43	10	14	11	13	11	46	7
8	9	37	10	5	10	36	11	4	10	46	11	18			0	19	8
9	10	33	11	0	11	33			11	50			0	49	1	17	9
10	11	27	11	53	0	0	0	27	0	20	0	48	1	45	2	12	10
11			0	19	0	54	1	21	1	16	1	43	2	36	2	58	11
12	0	43	1	6	1	47	2	13	2	10	2	36	3	16	3	32	12
13	1	30	1	53	2	36	2	57	2	56	3	14	3	48	4	5	13
14	2	16	2	39	3	15	3	31	3	31	3	48	4	24	4	46	14
15	2	58	3	15	3	48	4	3	4	4	4	21	5	7	5	28	15
16	3	32	3	48	4	23	4	43	4	40	5	1	5	54	6	22	16
17	4	4	4	20	5	3	5	22	5	22	5	43	6	50	7	21	17
18	4	40	5	1	5	44	6	8	6	8	6	35	7	55	8	32	18
19	5	22	5	43	6	33	7	1	7	4	7	34	9	10	9	48	19
20	6	8	6	34	7	30	8	0	8	8	8	43	10	26	11	4	20
21	7	1	7	29	8	34	9	9	9	21	10	0	11	34			21
22	8	0	8	34	9	44	10	22	10	37	11	12	0	3	0	31	22
23	9	7	9	43	10	59	11	35	11	47			0	58	1	26	23
24	10	18	10	53			0	10	0	21	0	51	1	52	2	15	24
25	11	28			0	43	1	13	1	20	1	48	2	33	2	50	25
26	0	3	0	35	1	43	2	11	2	13	2	35	3	5	3	20	26
27	1	6	1	37	2	39	2	59	2	55	3	12	3	34	3	47	27
28	2	7	2	34	3	17	3	34	3	27	3	42	4	0	4	16	28
29	2	58	3	18	3	50	4	6	3	55	4	10	4	32	4	49	29
30	3	35	3	54	4	21	4	38	4	24	4	40	5	7	5	25	30
31	4	10	4	30					4	58	5	15	5	45	6	7	31

	Adding	h	m
For Fowey, Loo and Plymouth	— — — —	3	10
Dartmouth, Harborough and Hull	— — — —	3	30
Torbay and Tinmouth	— — — —	3	40
Exmouth, Topsham and Lyme	— — — —	3	50
Weymouth	— — — —	4	20
Bidgewater and Texel	— — — —	4	40
Portland and Hartlew	— — — —	5	50

Time of High-Water at LONDON In the morning and afternoon of every day in the year.

Mo. Days	SEPTEMBER		OCTOBER		NOVEMBER		DECEMBER		Mo. Days
	morn. h. m.	aftern. h. m.	morn. h. m.	aftern. h. m.	morn. h. m.	aftern. h. m.	morn. h. m.	aftern. h. m.	
1	6 33	6 58	7 6	7 36	8 45	9 19	9 12	9 45	1
2	7 26	7 57	8 6	8 40	9 55	10 28	10 22	10 58	2
3	8 30	9 3	9 15	9 49	11 1	11 38	11 35		3
4	9 3	10 12	10 26	11 0		0 19	0 9	0 42	4
5	10 4	11 22	11 33		0 40	1 10	1 13	1 43	5
6	11 56		0 4	0 35	1 40	2 10	2 13	2 42	6
7	0 20	0 56	1 5	1 33	2 37	3 1	3 4	3 24	7
8	1 24	1 51	1 58	2 31	3 24	3 42	3 43	4 0	8
9	2 18	2 44	2 53	3 13	4 4	4 20	4 19	4 39	9
10	3 3	3 22	3 13	3 50	4 42	5 5	4 48	5 17	10
11	3 40	3 57	4 11	4 32	5 28	5 51	5 38	6 0	11
12	4 18	4 40	4 55	5 18	6 17	6 44	6 23	6 47	12
13	5 0	5 28	5 44	6 11	7 10	7 39	7 10	7 35	13
14	5 48	6 17	6 40	7 10	8 4	8 32	8 0	8 28	14
15	6 4	7 18	7 40	8 1	9 1	9 30	8 50	9 22	15
16	7 51	8 25	8 43	9 16	9 59	10 28	9 51	10 21	16
17	9 0	9 30	9 47	10 18	10 56	11 22	10 50	11 19	17
18	10 9	10 41	10 46	11 13	11 49		11 37		18
19	11 14	11 44	11 41		0 14	0 39	0 15	0 31	19
20		0 11	0 8	0 22	1 2	1 20	1 6	1 21	20
21	0 30	0 58	0 55	1 10	1 48	2 12	1 56	2 22	21
22	1 18	1 44	1 39	2 2	2 35	2 54	2 44	3 3	22
23	2 8	2 29	2 24	2 4	3 9	3 26	3 19	3 35	23
24	2 47	3 3	3 0	3 16	3 42	3 57	3 50	4 6	24
25	3 16	3 30	3 10	3 44	4 12	4 20	4 22	4 40	25
26	3 44	3 58	3 59	4 15	4 51	5 10	5 0	5 20	26
27	4 12	4 29	4 33	4 50	5 29	5 51	5 40	6 3	27
28	4 49	5 11	5 10	5 32	6 16	6 41	6 29	6 54	28
29	5 34	5 56	5 53	6 19	7 9	7 36	7 22	7 54	29
30	6 16	6 40	6 46	7 14	8 5	8 36	8 28	9 4	30
31			7 42	8 17			9 40	10 18	31

Subtracting

h m

For Leigh, Maes, and Gouries Gut	—	—	—	—	0	3
Graesend, Rochester, and Rammekins	—	—	—	—	1	20
Buoy of the Nose and Flushing	—	—	—	—	1	30
Portsmouth, Olfend, Shore-Recon, and Red-Sand	—	—	—	—	2	0
Harwich, Dover, Spithead, and Calais	—	—	—	—	3	0
Gunfleet, Hastings, Shoreham, Orfordness, and Diep	—	—	—	—	4	0
Yarmouth Pier and Needle	—	—	—	—	4	40
St. Helen's and Hantz-de-Grace	—	—	—	—	5	30

The Eclipses of Jupiter's

JANUARY				FEBRUARY				MARCH				APRIL			
Immersion				Immersion				Emergence				Emergence			
d	h	m	f	d	h	m	f	d	h	m	f	d	h	m	f
2	9	46	9	1	11	40	3	1	21	33	12	2	18	17	1
4	4	13	44	3	6	8	19	3	16	2	9	4	12	46	9
5	22	41	20	5	0	36	39	5	10	31	7	6	7	15	20
7	17	8	59	6	19	5	3	7	9	0	7	8	1	44	27
9	11	36	39	8	13	33	30	8	23	29	8	9	20	13	34
11	6	4	19	10	8	1	58	10	17	38	11	11	14	42	39
13	0	32	4	12	2	30	29	12	12	27	13	13	9	11	44
14	18	59	51	13	20	59	2	14	6	56	19	15	3	40	50
16	13	27	40	Emergence				16	1	25	24	16	22	9	54
18	7	55	31	15	17	42	59	17	19	54	30	18	16	38	56
20	2	23	24	17	12	11	38	19	14	23	37	20	11	7	58
21	20	51	20	19	6	40	19	21	8	52	45	22	5	36	58
23	15	19	20	21	1	9	2	23	3	21	53	24	0	5	57
25	9	47	23	22	19	37	46	24	21	51	2	25	18	34	55
27	4	15	27	24	14	6	34	26	16	20	12	27	13	3	51
28	22	43	36	26	8	35	24	28	10	49	23	29	7	32	44
30	17	11	48	28	3	4	17	30	5	18	34				
								31	23	47	48				
MAY				JUNE				JULY				AUGUST			
Emergence				Emergence				Emergence							
1	2	1	44	1	22	36	44	2	0	37	28	The Eclipses of the Satellites of Jupiter will not be visible this month, Jupiter being too near the Sun.			
2	20	30	30	3	17	5	4	3	19	5	46				
4	14	59	26	5	11	33	24	5	13	34	5				
6	9	28	11	7	6	1	45	7	8	2	24				
8	3	56	56	9	0	30	3	9	2	30	43				
9	22	25	40	10	18	58	18	10	20	59	4				
11	16	54	23	12	13	26	36	12	15	27	28				
13	11	23	5	14	7	54	52	14	9	55	52				
15	5	51	46	16	2	23	8	16	4	24	18				
17	0	20	25	17	20	51	22	17	22	52	44				
18	18	49	2	19	15	19	38	19	17	21	14				
20	13	17	36	21	9	47	54	21	11	49	45				
22	7	46	7	23	4	16	10	23	6	18	19				
24	2	14	35	24	22	41	26	25	0	46	49				
25	20	43	2	26	17	12	40	26	19	15	24				
27	15	11	29	28	11	40	53	28	13	44	10				
29	9	39	55	30	6	9	13	30	8	12	39				
31	4	8	21												

first Satellite for 1790.

SEPTEMBER	OCTOBER	NOVEMBER	DECEMBER
	Immersion	Immersion	Immersion
	d h m s	d h m s	d h m s
	1 23 22 49	1 1 32 2	1 3 29 11
	3 17 51 52	2 20 0 27	2 21 56 52
The Eclipses	5 12 20 50	4 14 28 50	4 16 24 31
of Jupiter's	7 6 49 48	6 8 57 10	6 10 52 8
Satellites will	9 1 18 45	8 3 25 27	8 5 19 44
not be visible	10 19 47 41	9 21 53 42	9 23 47 18
this month,	12 14 16 34	11 16 21 54	11 18 14 50
Jupiter being	14 8 45 26	13 10 50 3	13 12 42 21
too near the	16 3 14 16	15 5 18 9	15 7 9 53
Sun.	17 21 43 3	16 23 46 13	17 1 37 24
	19 16 11 48	18 18 14 14	18 20 4 54
	21 10 40 32	20 12 42 12	20 14 32 23
	23 5 9 11	22 7 10 8	22 8 59 53
	24 23 37 52	24 1 38 3	24 3 27 23
	26 18 6 27	25 20 5 57	25 21 54 53
	28 12 35 1	27 14 33 39	27 16 22 23
	30 7 3 33	29 9 1 29	29 10 49 53
			31 5 17 24

The Times of the Eclipses contained in this Table, are adapted to the Meridian of the Royal Observatory at Greenwich, and afford an excellent Method to discover the Longitude, or Difference of Meridians, between that and any other Place; which I shall illustrate by an EXAMPLE:

Suppose on the 25th Day of December of this Year, the Time of the Immersion of Jupiter's first Satellite be observed (by a Telescope) in an unknown Meridian, to happen at 23 h. 45 min. 13 sec.; I find by the Table, that the Time of this Immersion will happen at the British Observatory, at 21 h. 54 min. 53 sec. the same day: The Difference of the Times is 1 hour 48 min. 20 sec. which being converted into Degrees and Minutes of the Equator, will make 27 deg. 5 min. the Longitude of the Place of Observation, to the East, because the Time is more than that at the British Observatory.

Speculum Phenomenorum

JANUARY		FEBRUARY		MARCH	
1	stationary	1	♂ in ☿	1	♂ in aphelio
2	♂ ☿ 75h.	5	♂ elong. max.	4	♂ in perigeo
3	♂ ☿ 7h.	5	♂ in perigeo	5	♂ stationary
4	♂ ☿ 7h.	6	♂ in perihelio	11	♂ in ☿
9	♂ elong. g. max.	10	♂ ☿ 5h.	12	♂ ☿ 19h.
10	♂ in perigeo	11	♂ stationary	15	♂ ☿ 8h.
13	♂ in ☿	13	♂ in perihelio	15	♂ ☿ 15h.
14	♂ ☿ 12h.	14	♂ ☿ 6h.	15	♂ ☿ 22h.
16	♂ ☿ 23h.	14	♂ ☿ 30h.	1	♂ ☿ 3h.
19	♂ ☿ 6h.	15	♂ ☿ 18h.	8	♂ elong. max.
19	♂ in ☿ 6h. 24m.	16	♂ ☿ 20h.	19	♂ in apogeo
24	♂ in apogeo	17	♂ in ☿ 21h. 14m.	19	♂ in ☿ 21h. 38m.
31	♂ ☿ 7h.	19	♂ ☿ 11h.	21	♂ in aphelio
31	♂ ☿ 11h.	20	♂ in apogeo	24	♂ stationary
		21	♂ stationary	26	♂ ☿ 7h.
		27	♂ ☿ 2h.	26	♂ ☿ 22h.
		27	♂ ☿ 16h.		
APRIL		MAY		JUNE	
1	♂ in perigeo	2	♂ in ☿	5	♂ ☿ 21h.
9	♂ stationary	4	♀ in ☿	5	♀ in aphelio
10	♂ ☿ 6h.	5	♂ in perihelio	7	♂ in ☿
11	♂ ☿ 20h.	9	♂ ☿ 9h.	8	♂ ☿ 7h.
13	♂ ☿ 15h.	9	♂ ☿ 5h.	8	♂ in apogeo
14	♂ eclipsed, invis.	11	♂ in apogeo	12	♂ stationary
15	♂ in apogeo	12	♂ ☿ 17h.	3	♂ ☿ 14h.
17	♂ stationary	14	♂ eclipsed, invis.	17	♂ ☿ 3h.
19	♂ in ☿ 19h. 23m.	15	♂ ☿ 5h.	17	♂ in aphelio
22	♂ ☿ 5h.	16	♂ ☿ 8h.	18	♂ ☿ 5h.
23	♂ ☿ 6h.	22	♂ ☿ 15h.	20	♂ in ☿ 19h. 40m.
28	♂ eclipsed, invis.	20	♂ in ☿ 17h. 58m.	22	♂ in perigeo
28	♂ in apogeo	21	♂ ☿ 10h.	25	♂ ☿ 3h.
29	♂ ☿ 9h.	28	♂ in perigeo	26	♂ ☿ 17h.
30	♂ in ☿	27	♂ elong. max.		
		27	♂ elong. max.		

1790.

Spec. Phænom.

39

ad Annum 1790.

JULY	AUGUST	SEPTEMBER
3 $\odot$ h C 7h. 5 C in apogeo 6 C stationary 8 $\odot$ C 6h. 10 $\odot$ C 6h. 14 $\odot$ C 17h. 16 $\odot$ C 14h. 16 C elong. max. 17 h stationary 19 C in perigeo 22 $\odot$ in Ω 6h. 39m. 27 C in Ω 30 $\odot$ C 15h. 31 C in perihelio	2 C in apogeo 7 $\odot$ C 8h. 9 $\odot$ C 23h. 11 $\odot$ C 10h. 12 $\odot$ C 1h. 14 $\odot$ C 1h. 14 C in Ω 15 C in perigeo 22 $\odot$ in M 12h. 20m. 25 C in Ω 26 $\odot$ C 21h. 29 C in apogeo	3 $\odot$ C 20h. 3 C in Ω 6 $\odot$ C 8h. 8 $\odot$ C 6h. 10 $\odot$ C 1h. 11 $\odot$ C 16h. 11 C in perigeo 13 C in aphelio 22 $\odot$ in Δ 9h. 17m. 23 $\odot$ C 0h. 24 $\odot$ C 23h. 25 C elong. max. 25 C in perihelio 25 C in apogeo
OCTOBER	NOVEMBER	DECEMBER
6 $\odot$ C 2h. 6 $\odot$ C 8h. 8 C stationary 8 C eclipsed, invis. 9 $\odot$ C 6h. 9 C in perigeo 10 $\odot$ C 10h. 20 $\odot$ C 2h. 20 $\odot$ C 6h. 22 C eclipsed, invis. 22 $\odot$ in M 17h. 13m. 22 C in apogeo 23 C in Ω 27 C in perihelio 29 C stationary	2 $\odot$ C 21h. 4 $\odot$ C 22h. 4 C elong. max. 5 $\odot$ C 7h. 5 C in perigeo 6 $\odot$ eclipsed, invisible 8 $\odot$ C 6h. 16 $\odot$ C 0h. 18 C in apogeo 21 $\odot$ in f 13h. 28m. 30 $\odot$ C 13h. 30 C in Ω	1 h stationary 2 C in perigeo 5 $\odot$ C 6h. 5 $\odot$ C 9h. 7 $\odot$ C 5h. 10 C in aphelio 13 $\odot$ C 12h. 14 $\odot$ C 1h. 15 C in Ω 16 C in apogeo 20 $\odot$ C 14h. 21 $\odot$ C 16h. 21 $\odot$ in h 1h. 52m. 28 $\odot$ C 0h. 29 C in perigeo

A Table of the Sun's semi-diurnal Arches, or Times

The SUN's Declination North.

Deg. No.	Lat. 49		Lat. 50		Lat. 51		Lat. 52		Lat. 53		Lat. 54	
	h	m	h	m	h	m	h	m	h	m	h	m
0	6	4	6	4	6	4	6	4	6	4	6	4
1	6	8	6	8	6	8	6	9	6	9	6	9
2	6	12	6	13	6	13	6	14	6	14	6	15
3	6	17	6	18	6	18	6	19	6	19	6	20
4	6	22	6	22	6	22	6	24	6	25	6	25
5	6	26	6	27	6	27	6	29	6	30	6	31
6	6	31	6	32	6	33	6	34	6	36	6	37
7	6	36	6	37	6	38	6	40	6	41	6	43
8	6	41	6	42	6	43	6	45	6	47	6	48
9	6	45	6	47	6	48	6	50	6	52	6	54
10	6	50	6	52	6	54	6	56	6	58	7	0
11	6	55	6	57	6	59	7	1	7	3	7	6
12	7	0	7	2	7	4	7	7	7	9	7	12
13	7	5	7	7	7	10	7	12	7	15	7	18
14	7	10	7	13	7	15	7	18	7	21	7	24
15	7	15	7	18	7	21	7	24	7	27	7	31
16	7	21	7	24	7	27	7	30	7	33	7	37
17	7	26	7	29	7	33	7	36	7	40	7	44
18	7	31	7	35	7	38	7	42	7	46	7	51
19	7	37	7	41	7	45	7	49	7	53	7	58
20	7	43	7	47	7	51	7	55	8	0	8	5
21	7	49	7	53	7	57	8	2	8	7	8	12
22	7	55	7	59	8	4	8	9	8	14	8	20
23	8	1	8	6	8	11	8	16	8	22	8	28
24	8	7	8	12	8	18	8	24	8	30	8	36

By these Tables the Times of the Sun's Rising and Setting may be found, in any Part of the Kingdom of *Great-Britain* or *Ireland*, after the following Manner: Where the Latitude of the Place is known, take the Sun's Declination out of the Table, on the Noon of the Day you desire to know the Time of his Rising and Setting; and with it, according as it is either North or South, enter these Tables in the Left-

of his visible half Duration above the Horizon.

The Sun's Declination South.

Degr.	Lat. 49		Lat. 50		Lat. 51		Lat. 52		Lat. 53		Lat. 54	
	h	m	h	m	h	m	h	m	h	m	h	m
0	6	4	6	4	6	4	6	4	6	4	6	4
1	5	59	5	59	5	58	5	58	5	58	5	58
2	5	54	5	54	5	53	5	53	5	53	5	53
3	5	49	5	49	5	49	5	48	5	48	5	47
4	5	45	5	44	5	44	5	43	5	42	5	42
5	5	40	5	39	5	39	5	38	5	37	5	36
6	5	35	5	35	5	34	5	33	5	31	5	30
7	5	31	5	30	5	29	5	27	5	26	5	25
8	5	26	5	25	5	23	5	22	5	21	5	19
9	5	21	5	20	5	18	5	17	5	16	5	13
10	5	17	5	15	5	13	5	11	5	10	5	8
11	5	12	5	10	5	8	5	6	5	4	5	2
12	5	7	5	5	5	3	5	0	4	58	4	56
13	5	2	5	0	4	57	4	55	4	52	4	50
14	4	57	4	54	4	52	4	49	4	47	4	44
15	4	52	4	49	4	46	4	44	4	41	4	37
16	4	46	4	45	4	41	4	38	4	34	4	31
17	4	41	4	38	4	35	4	32	4	28	4	23
18	4	36	4	33	4	29	4	26	4	22	4	18
19	4	30	4	27	4	23	4	19	4	15	4	11
20	4	25	4	21	4	17	4	13	4	9	4	4
21	4	19	4	15	4	11	4	6	4	2	3	57
22	4	13	4	9	4	4	4	0	3	55	3	50
23	4	7	4	3	3	58	3	53	3	47	3	42
24	4	1	3	56	3	51	3	46	3	40	3	34

Left-hand Column, under the Word Degrees; then look the Latitude of the Place in the Top of the Table; and in that Column, against the Sun's Declination, will be found the Time of his visible half Duration above the Horizon, or Time of his Setting, correct by Refraction; then subtract the Time of his Setting from 12 Hours, the Remainder will be the Time of his Rising; double the Time of his Setting, the

A Table of the Sun's semi-diurnal Arches, or Times

The Sun's Declination North.

Decl.	Lat. 55		Lat. 56		Lat. 57		Lat. 58		Lat. 59		Lat. 60	
	h	m	h	m	h	m	h	m	h	m	h	m
0	6	4	6	4	6	4	6	4	6	4	6	4
1	6	9	6	10	6	10	6	10	6	11	6	11
2	6	15	6	16	6	16	6	17	6	17	6	18
3	6	21	6	22	6	22	6	23	6	24	6	25
4	6	27	6	28	6	29	6	30	6	31	6	32
5	6	32	6	34	6	35	6	36	6	38	6	39
6	6	38	6	40	6	41	6	43	6	44	6	46
7	6	44	6	46	6	48	6	49	6	51	6	53
8	6	50	6	52	6	54	6	56	6	58	7	1
9	6	56	6	58	7	1	7	3	7	5	7	8
10	7	2	7	5	7	7	7	10	7	13	7	16
11	7	8	7	10	7	14	7	17	7	20	7	23
12	7	15	7	18	7	21	7	34	7	27	7	31
13	7	21	7	24	7	28	7	31	7	35	7	39
14	7	28	7	31	7	35	7	39	7	43	7	47
15	7	34	7	39	7	42	7	46	7	51	7	56
16	7	41	7	45	7	49	7	54	7	59	8	4
17	7	48	7	52	7	57	8	1	8	7	8	13
18	7	55	8	0	8	5	8	10	8	16	8	22
19	8	2	8	7	8	13	8	19	8	25	8	32
20	8	10	8	15	8	21	8	28	8	35	8	42
21	8	18	8	24	8	30	8	37	8	45	8	53
22	8	26	8	32	8	39	8	47	8	55	9	4
23	8	34	8	41	8	49	8	57	9	6	9	16
24	8	43	8	51	8	59	9	8	9	18	9	29

the Sum will be the Length of the Day; and double the Time of his Rising, the Sum will be the Length of the Night. But if the Latitude of the Place, and Declination of the Sun, consist of Degrees and Minutes, then a small Allowance must be made for the Minutes in both Cases, which may be done by a Person of an ordinary Capacity by a mental Proportion only. Thus, to find the Time of the Sun's Rising and Setting at

of his visible half Duration above the Horizon.

The Sun's Declination South.

Degr.	Lat. 55		Lat. 56		Lat. 57		Lat. 58		Lat. 59		Lat. 60	
	h	m	h	m	h	m	h	m	h	m	h	m
0	6	4	6	4	6	4	6	4	6	4	6	4
1	5	58	5	58	5	58	5	58	5	57	5	57
2	5	52	5	52	5	52	5	51	5	51	5	50
3	5	47	5	46	5	45	5	45	5	44	5	43
4	5	41	5	40	5	39	5	38	5	37	5	36
5	5	35	5	34	5	33	5	32	5	31	5	29
6	5	29	5	28	5	27	5	25	5	24	5	22
7	5	23	5	22	5	20	5	19	5	17	5	15
8	5	17	5	16	5	14	5	12	5	10	5	8
9	5	12	5	10	5	8	5	5	5	3	5	2
10	5	5	5	3	5	1	4	59	4	56	4	53
11	4	59	4	57	4	54	4	52	4	49	4	46
12	4	53	4	51	4	48	4	45	4	42	4	38
13	4	47	4	44	4	41	4	38	4	34	4	30
14	4	41	4	37	4	34	4	30	4	27	4	23
15	4	34	4	31	4	27	4	23	4	19	4	14
16	4	27	4	24	4	20	4	15	4	11	4	6
17	4	21	4	17	4	12	4	8	4	3	3	57
18	4	14	4	9	4	5	4	0	3	54	3	48
19	4	7	4	2	3	56	3	51	3	45	3	39
20	3	59	3	54	3	49	3	43	3	36	3	29
21	3	52	3	46	3	40	3	34	3	27	3	19
22	3	44	3	38	3	31	3	24	3	17	3	9
23	3	36	3	29	3	23	3	15	3	6	2	57
24	3	27	3	20	3	13	3	5	2	55	2	45

at Aberdeen in Scotland, on the Longest Day; the Latitude of that Place is accounted 57 Degr. 7 Min. North, and the Sun's Declination 23 Degr. 28 Min. likewise North. By these you will find by the Table, that 5 Min. for the Sun's Declination, and 1 Min. for the Latitude of the Place, are both, to be added to 8 Hours 49 Min. the Time belonging to 57 Degr. of Latitude and 23 Degr. of North Declination, and the Sum will be 8 Hours 55 Min. the Time of his apparent Setting at Aberdeen, on the longest Day, whose Complement to 12 Hours, viz. 3 Hours 5 Min. will be the Time of his Rising, &c.

A Table of the Sun's Right-Ascension in Time, the greatest

Deg.	♈			♉			♊			♋			♌			♍		
	h	m	s	h	m	s	h	m	s	h	m	s	h	m	s	h	m	s
0	0	0	0	1	51	37	3	51	15	6	0	0	8	8	45	10	8	23
1	0	3	40	1	55	27	3	55	25	6	4	22	8	12	54	10	12	12
2	0	7	20	1	59	17	3	59	36	6	8	43	8	17	3	10	16	0
3	0	11	0	2	3	8	4	3	48	6	13	5	8	21	11	10	19	48
4	0	14	41	2	6	59	4	8	0	6	17	26	8	25	19	10	23	35
5	0	18	21	2	10	51	4	12	13	6	21	48	8	29	26	10	27	22
6	0	22	2	2	14	44	4	16	26	6	26	9	8	33	31	10	31	8
7	0	25	42	2	18	37	4	20	40	6	30	30	8	37	37	10	34	54
8	0	29	23	2	22	31	4	24	55	6	34	51	8	41	41	10	38	40
9	0	33	4	2	26	25	4	29	10	6	39	11	8	45	45	10	42	25
10	0	36	45	2	30	20	4	33	26	6	43	31	8	49	48	10	46	9
11	0	40	26	2	34	16	4	37	42	6	47	51	8	53	51	10	49	53
12	0	44	8	2	38	13	4	41	59	6	52	11	8	57	52	10	53	37
13	0	47	50	2	42	10	4	46	16	6	56	31	9	1	53	10	57	20
14	0	51	32	2	46	8	4	50	34	7	0	50	9	5	53	11	1	3
15	0	55	14	2	50	7	4	54	52	7	5	8	9	9	51	11	4	46
16	0	58	3	2	54	7	4	59	10	7	9	26	9	13	52	11	8	28
17	1	2	40	2	58	7	5	3	29	7	13	44	9	17	50	11	12	10
18	1	6	23	3	2	8	5	7	49	7	18	1	9	21	47	11	15	52
19	1	10	7	3	6	9	5	12	9	7	22	18	9	25	44	11	19	34
20	1	13	51	3	10	12	5	16	29	7	26	34	9	29	40	11	23	15
21	1	17	35	3	14	15	5	20	49	7	30	50	9	33	35	11	26	56
22	1	21	20	3	18	19	5	25	9	7	35	5	9	37	29	11	30	37
23	1	25	6	3	22	23	5	29	30	7	39	20	9	41	23	11	34	18
24	1	28	52	3	26	29	5	33	51	7	43	34	9	45	16	11	37	58
25	1	32	38	3	30	35	5	38	12	7	47	47	9	49	9	11	41	39
26	1	36	25	3	34	41	5	42	34	7	52	0	9	53	1	11	45	16
27	1	40	12	3	38	49	5	46	55	7	56	12	9	56	52	11	49	0
28	1	44	0	3	42	57	5	51	17	8	0	24	10	0	43	11	52	40
29	1	47	48	3	47	6	5	55	38	8	4	35	10	4	33	11	56	20
30	1	51	37	3	51	15	6	0	0	8	8	45	10	8	23	12	0	0

The time of the southing or meridian transits of the fixed stars in pa. 46, may be found thus. On the noon of the day, preceding the night in which you want to know the time of the southing of any of those stars, find the Sun's place in the Ephemeris, and with it take out of the above table his right ascension in time; this you may do by inspection to a minute, which will be sufficient for your present purpose; Then from the right-ascension of the star in pa. 46, subtract the right-ascension of the Sun, the remainder will be the estimate time of the star's southing, and will not differ from the true time above 2 or 3 minutes at most, which may be near enough for ordinary uses. But when great exactness is required, reduce the Sun's place to this estimate time, and with it find in the above table his right ascension to seconds, which being subtracted from that of the star, the remainder will be the

Obliquity of the Ecliptic being $23^{\circ} 28'$.

Def.	Δ	Γ	Γ	Γ	Γ	Γ
	h m s	h m s	h m s	h m s	h m s	h m s
0	12 0 0	13 51 37	15 51 15	18 0 0	20 8 45	22 8 23
1	12 3 40	13 55 27	15 55 25	18 4 22	20 12 54	22 12 12
2	12 7 20	13 59 17	15 59 36	18 8 43	20 17 3	22 16 0
3	12 11 0	14 3 8	16 3 48	18 13 5	20 21 11	22 19 48
4	12 14 41	14 6 59	16 7 0	18 17 26	20 25 19	22 23 35
5	12 18 21	14 10 51	16 12 13	18 21 48	20 29 26	22 27 22
6	12 22 2	14 14 44	16 16 26	18 26 9	20 33 31	22 31 8
7	12 25 42	14 18 37	16 20 40	18 30 30	20 37 37	22 34 54
8	12 29 23	14 22 31	16 24 55	18 34 51	20 41 41	22 38 40
9	12 33 4	14 26 25	16 29 10	18 39 11	20 45 45	22 42 25
10	12 36 45	14 30 20	16 33 26	18 43 31	20 49 48	22 46 9
11	12 40 26	14 34 16	16 37 42	18 47 51	20 53 51	22 49 53
12	12 44 8	14 38 13	16 41 59	18 52 11	20 57 52	22 53 37
13	12 47 50	14 42 10	16 46 16	18 56 31	21 1 53	22 57 20
14	12 51 32	14 46 8	16 50 34	19 0 50	21 5 53	23 1 3
15	12 55 14	14 50 7	16 54 52	19 5 8	21 9 53	23 4 46
16	12 58 57	14 54 7	16 59 10	19 9 26	21 13 52	23 8 28
17	13 2 40	14 58 7	17 3 29	19 13 44	21 17 50	23 12 10
18	13 6 23	15 2 8	17 7 49	19 18 1	21 21 47	23 15 52
19	13 10 7	15 6 9	17 12 9	19 22 18	21 25 44	23 19 34
20	13 13 51	15 10 12	17 16 29	19 26 34	21 29 40	23 23 15
21	13 17 35	15 14 15	17 20 49	19 30 50	21 33 35	23 26 56
22	13 21 20	15 18 19	17 25 9	19 35 5	21 37 29	23 30 37
23	13 25 6	15 22 23	17 29 30	19 39 20	21 41 23	23 34 18
24	13 28 52	15 26 29	17 33 51	19 43 34	21 45 16	23 37 58
25	13 32 38	15 30 35	17 38 12	19 47 47	21 49 9	23 41 39
26	13 36 25	15 34 41	17 42 34	19 52 0	21 53 1	23 45 19
27	13 40 12	15 38 49	17 46 55	19 56 12	21 56 52	23 49 0
28	13 44 0	15 42 57	17 51 17	20 0 24	22 0 43	23 52 40
29	13 47 48	15 47 6	17 55 38	20 4 35	22 4 33	23 56 20
30	13 51 37	15 51 15	18 0 0	20 8 45	22 8 23	24 0 0

the true time of the star's culminating or southing. And if from the time of the star's southing you subtract the semidiurnal arc belonging to it, the remainder will be the time of the star's rising; and being added to it, the sum will be the time of its setting.

Annexed is an Ex. of STATUS for Jan. 31, 1790.

$\odot$'s place at noon	$11^{\circ} 55'$	h m s
Rt. Asc. of Sirius	-	6 35 33
$\odot$'s rt. asc. subtract	-	20 57 0
$\star$'s estimate southing	-	9 38 33
$\odot$'s rt. asc. at that time sub.	-	10 50 12
$\star$'s true southing	-	9 36 21
Semid. arc sub. & add	-	4 36 53
$\star$'s rising aftern.	-	4 59 26
$\star$'s setting	-	14 13 16

A Table of the mean Right-Ascensions in time, Semidurnal-Arcs, Declinations, and Magnitudes of 40 remarkable fixed Stars; with their Names, and Bayer's Literal Characters, for January 1, 1782.

Names of the Stars	Ch.	Rt. Afr.			Declination	Semid.Ar.			Ma	
		h	m	s	°	'	"	h	m	s
Pole star, Alruccabah	α	0	48	3	88	8	36	n	sets not	2
Andromeda's girdle, Mirach	β	0	57	36	34	27	35	n	10 7 31	2
Andromeda's left foot, Almach	γ	1	50	36	41	16	30	n	sets not	2
Ram's following horn	α	1	54	56	22	25	27	n	8 9 35	2
Whale's jaw, Menkar	α	2	50	54	3	13	26	n	6 19 48	2
Medusa's head, Algol	β	2	54	4	40	6	6	n	sets not	2
Perseus's right side, Algenib	α	3	8	51	49	4	11	n	sets not	2
Brightest of the 7 stars	η	3	34	34	23	25	2	n	8 16 40	3
Bull's south eye, Aldebaran	α	4	23	26	16	3	23	n	7 28 51	1
Auriga's left shoulder, Capella	α	5	0	37	45	44	59	n	sets not	1
Orion's left foot, Rigel	β	5	4	4	8	28	3	s	5 20 18	1
Bell's north horn	β	5	12	32	28	24	22	n	8 57 1	2
Orion's left shoulder, Bellatrix	γ	5	13	27	6	8	10	n	6 34 41	2
Orion's girdle	ε	5	25	10	1	21	24	s	5 56 42	2
Orion's right shoulder, Betelgeuse	α	5	43	23	7	20	59	n	6 40 58	1
In the great Dog's mouth, Sirius	α	6	35	33	16	25	14	s	4 36 55	1
Head of the 1st Twin, Castor	α	7	20	41	32	20	54	n	9 38 21	1
In the left Dog's thigh, Procyon	α	7	27	54	5	46	41	n	6 32 50	1
Head of the 2d Twin, Pollux	β	7	31	59	28	32	14	n	8 58 13	2
Hydra's heart, Alphard	α	9	16	53	7	43	21	s	5 24 20	2
Lion's heart, Regulus	α	9	56	45	13	1	32	n	7 11 28	1
Great Bear, Lower Pointer	β	10	48	34	57	32	47	n	sets not	2
Great Bear, Upper Pointer	α	10	50	8	62	55	27	n	sets not	2
Lion's tail, Deneb	β	11	37	56	15	47	28	n	7 27 18	2
Great Bear, 1st in the tail, Aliath	ε	12	44	22	57	8	46	n	sets not	2
Virgius's spike	α	13	13	44	10	1	2	s	5 12 20	1
Dragon's tail	α	13	58	30	65	25	19	n	sets not	2
Bootes, Arcturus	α	14	5	46	20	20	5	n	7 55 26	1
Libra, Southern Scale	α	14	38	52	15	7	26	s	4 44 23	2
Libra, Northern Scale	β	15	5	18	8	33	59	s	5 19 57	2
Bright star in the North Crown	α	15	25	28	27	27	35	n	8 43 36	2
Scorpion's heart, Antares	α	16	16	4	25	55	50	s	3 34 6	1
Hercules's head, Ras. Algethi	α	17	4	43	14	39	8	n	7 20 41	2
Head of Serpentarius	α	17	24	49	12	44	2	n	7 9 50	2
Dragon's head, Rastaban	γ	17	51	34	51	31	19	n	sets not	2
Bright star in the Harp, Lyra	α	18	29	33	38	34	19	n	sets not	1
Bright star in the Eagle, Atair	α	19	40	8	8	18	10	n	6 45 57	2
Mouth of south Fish, Fomalhaut	α	22	45	34	30	46	17	s	2 52 6	1
Pegasus's wing, Markab	α	22	53	55	14	2	8	n	7 17 10	2
Andromeda's head	α	23	57	9	27	53	2	n	8 52 19	2

A Table of the Longitudes, Latitudes, and Magnitudes of the most remarkable fixed Stars that the Moon can Eclipse, or make a near Appulse unto; exactly rectified to the beginning of the year 1780.

Con.	Cha.	Long.	Lat.	Magn.	Con.	Cha.	Long.	Lat.	Magn.
		° ' "	° ' "				° ' "	° ' "	
♄	♄	11 4 48	2 9 44 n	4	♄	♄	12 1 6	0 21 48 n	2
	♄	14 28 2	1 5 37 n	4	♄	♄	17 56 14	1 49 14 s	3
	♄	16 48 2	0 13 11 s	4	♄	♄	22 3 46	4 24 41 n	3
♄	♄	17 46 21	1 48 7 n	4	♄	♄	24 18 10	4 2 52 n	4
♄	♄	26 55 21	4 1 36 n	3	♄	♄	24 41 24	0 1 1 n	4
♄	♄	2 43 37	5 45 30 s	3	♄	♄	26 47 49	3 29 24 n	4
	♄	5 23 14	2 35 37 s	3	♄	♄	27 24 23	0 6 53 n	4
	♄	6 42 57	5 29 2 s	1	♄	♄	29 30 5	1 57 17 s	3
	♄	19 30 14	5 21 59 n	2	♄	♄	29 52 12	5 26 1 s	3
	♄	21 42 52	2 13 29 s	3	♄	♄	0 7 10	1 2 18 n	2
♄	♄	0 22 14	0 55 4 s	4	♄	♄	1 34 27	1 39 57 n	4
	♄	2 13 39	0 50 34 s	3	♄	♄	4 43 50	4 0 23 s	4
	♄	5 1 5	6 46 12 s	2	♄	♄	6 41 35	4 32 17 s	1
	♄	6 52 7	2 2 28 n	3	♄	♄	8 23 19	6 5 21 s	4
	♄	15 27 6	0 12 19 s	3	♄	♄	28 11 40	6 56 48 s	3
	♄	20 11 11	6 40 4 n	1	♄	♄	0 8 35	2 22 24 n	4
♄	♄	4 28 28	3 10 22 n	4	♄	♄	3 15 8	2 5 31 s	4
	♄	5 38 46	0 4 13 s	4	♄	♄	7 6 25	3 55 22 s	3
♄	♄	18 35 c	3 1 57 s	4	♄	♄	9 18 54	3 24 55 s	3
	♄	21 11 15	3 46 1 s	4	♄	♄	11 46 9	5 2 33 s	3
	♄	24 50 0	4 51 9 n	4	♄	♄	11 55 13	0 53 36 n	3
	♄	26 46 26	0 27 27 n	1	♄	♄	13 10 58	1 28 7 n	4
	♄	3 19 2	0 8 29 n	4	♄	♄	0 58 32	4 36 46 n	3
	♄	18 26 24	0 31 21 s	4	♄	♄	17 7 37	4 57 31 s	4
	♄	21 58 9	3 2 51 s	4	♄	♄	18 42 30	2 32 6 s	4
♄	♄	24 2 24	0 41 36 n	3	♄	♄	20 27 42	9 33 40 s	3
	♄	0 17 47	5 4 42 n	3	♄	♄	25 38 54	2 3 47 s	4
	♄	1 45 53	1 22 24 n	3	♄	♄	0 11 19	2 43 22 n	4
	♄	7 6 18	2 48 57 n	3	♄	♄	8 30 20	0 22 57 s	4
	♄	20 46 27	2 2 11 s	1	♄	♄	14 4 16	1 2 8 s	4

This table shewing the mean longitudes of 60 stars to the beginning of the year 1780, their mean longitudes for any other time may be found if 50 $\frac{1}{2}$ seconds be added for each succeeding, and subtracted for each preceding year, and proportionably for a part of a year. Thus, to find the longitude of the first star ♄♄, or ♄ piscium, for Feb. 15, 1782, or 2 years and one eighth after the tabular time; here 2 $\frac{1}{8}$ times 50 $\frac{1}{2}$ sec. make 1' 47", which being added to the tabular longitude, gives ♄ 11° 6' 35" for the longitude required at the given time.—The latitudes vary not.

The Latitudes and Longitudes of Ninety Places.

	Lat.	Long.		Lat.	Long.
	° ' "	° ' "		° ' "	° ' "
Alexandria, Egypt	31 11 n	30 17 e	Isfahan	32 25 n	52 55 e
Amsterdam, Hol.	52 23 n	4 52 e	Land's end	50 6 n	5 50 w
Archangel, Ruf.	64 34 n	38 30 e	Leghorn	43 33 n	10 25 e
Athens	37 40 n	23 52 e	Leostoff	52 38 n	1 54 e
Babelmandel	13 50 n	43 50 e	Leverpool	53 22 n	3 10 w
Batavia	6 12 s	106 45 e	Lima	12 1 s	76 50 w
Bengal	22 0 n	92 45 e	Lisbon	38 42 n	9 4 w
Berlin	52 33 n	13 26 e	Lizard	49 57 n	5 21 w
Bombay Isle	19 42 n	73 3 e	London	51 31 n	0 0
Boston, Amer.	42 25 n	70 37 w	Madras	13 8 n	80 7 e
Breslau	51 3 n	17 13 e	Madrid	40 25 n	3 45 w
Brest	48 23 n	4 30 w	Manila	14 30 n	120 25 e
Bristol	51 28 n	2 30 w	Marseilles	43 18 n	5 21 e
Buenos Ayres	34 35 s	58 0 w	Mexico	19 54 n	100 5 w
Cadiz	36 31 n	6 7 w	Mississipi, mouth	29 0 n	89 17 w
Calais	50 58 n	1 51 e	Moscow	55 25 n	37 51 e
Cairo, Egypt	30 2 n	31 26 e	Naples	40 51 n	14 19 e
Cambridge	52 13 n	0 4 e	Newcastle	55 0 n	1 18 w
Canaris Islands	28 1 n	15 0 w	Oporto	40 53 n	8 35 w
Canton	23 8 n	113 2 e	Orkney I. northend	59 24 n	3 23 w
Cape of Goodhope	34 29 s	18 23 e	Oxford	51 45 n	1 16 w
Cape Horn	55 59 s	67 26 w	Paris	48 50 n	2 25 e
Carthegena	10 27 n	75 26 w	Pekin	39 55 n	116 22 e
Charles Town, Ath.	33 22 n	79 50 w	Petersburg	59 56 n	30 19 e
Constantinople	41 0 n	28 53 e	Philadelphia	39 57 n	75 18 w
Copenhagen	55 41 n	12 50 e	Plymouth	50 24 n	4 15 w
Corinth	37 30 n	23 0 e	Port Mahon	39 51 n	3 53 e
Corke	51 54 n	8 30 w	Port Royal, Jam.	17 40 n	76 37 w
Dantzic	54 22 n	18 36 e	Portsmouth	50 48 n	1 2 w
Dover	51 7 n	1 19 e	Prague	50 5 n	14 15 e
Dublin	53 12 n	6 55 w	Quebec	46 55 n	71 12 w
Edinburgh	55 53 n	3 1 w	Rome	41 54 n	12 32 e
Ferro, Isle	27 43 n	18 6 w	Scilly Isles	50 0 n	6 45 w
Finisterre, Cape	42 57 s	9 36 w	Smyrna	38 28 n	27 25 e
Genoa	44 25 n	8 41 e	Stockholm	59 22 n	18 12 e
Gibraltar	36 5 n	4 46 w	Syracuse	37 4 n	15 20 e
Glasgow	55 52 n	4 5 w	Tangier	35 55 n	5 45 w
Goa	15 31 n	73 50 e	Teneriff	28 16 n	16 32 w
Gottingen	51 32 n	9 58 e	Tunis	36 47 n	10 16 e
Greenwich	51 29 n	0 5 e	Turin	45 5 n	7 45 e
Haelg's Head.	79 55 n	12 0 e	Venice	45 27 n	12 24 e
Halifax, America	44 46 n	63 20 w	Verd, Capé	14 47 n	17 28 w
Havana	23 12 n	81 11 w	Vienna	48 11 n	16 28 e
Helena, I. St.	15 55 s	5 49 w	Upsal	59 52 n	17 43 e
J. rusalem	31 50 n	35 25 e	Uraniberg	55 54 n	12 52 e

F I N I S.



